

# P&H® 6250-TC

## 300-ton Truck Crane

### UPPER MACHINERY



#### POWER PLANT

<b>ENGINE:</b>	STANDARD
Make	Cummins
Model	NTA-855C
Type	Diesel
No. of Cylinders	6
Bore x Stroke, In.	5.50 x 6.00
cm	14.0 x 15.24
Displacement, In. <sup>3</sup>	855
liters	14.011
Cycles	4
Air Induction	Turbo-charged, Aftercooled
Cooling	Liquid
Starter	24 Volt
Alternator	24 V. - 50 Amp.

#### TORQUE CONVERTER:

Make	Twin Disc
Model	4-MOP-2014-1
Type	Modulated clutch, electronically controlled. 70 gal (265 L) reservoir 2 double power take-offs

#### RATINGS:

Net HP @ RPM (Flywheel)	420 @ 2300
Net HP @ RPM (Converter Output Shaft)	240.6 @ 1990
Altitude Range	0-7000
In. Ft. (m)	(0-2100)
Temp. Range in F. (C.)	-20° to 110° (-28° to 43°)

**Input disconnect clutch** — Torque converter — Five plate wet type electro-hydraulically actuated.

**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).

**RIGHT TRANSMISSION:** Two speed, electro-hydraulic powershift transmission, chain drive. Pressure lubricated bearings, gear and chain (driven by torque converter).

**LEFT TRANSMISSION:** Two speed transmission; hydraulic disc clutches non-power shift; input and output through universal drive shafts; pressure lubricated anti-friction bearings, roller chain and spur gears, (driven by engine front crankshaft). Electrical interlock to prevent shifting transmission above 650 rpm idle.

**Fuel tank capacity** — Two 79 gal. (299 liters) tanks - 158 gal. (598 liters) total.

**Lube oil capacity** — Engine - 28 quarts (26.5 liters). Filter - 18 quarts (17 liters).

**Coolant capacity** — Engine - 5.5 gallons (20.8 liters). Radiator 9.25 gallons (35 liters) sheet metal, tube & plate fin type.

**Air cleaner** — Farr - dry type, 2 stage.

**Lube oil filter** — Remote mounted - replaceable. Full flow and by-pass.

**Fuel filter** — Dual spin-on - replaceable.

**Starting aid** — Required below 14 F. (-10 C) ether-measured shot.

**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** — (4) - 12 volt H.D. rates, series and parallel 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 chairs are hardened, sealed in oil bath for long, trouble free operation.

**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 covered with non-skid floor plate. Deck machinery is in compact arrangement, easy to maintain and repair.

**GANTRY:** Three position telescopic gantry. Power raise and lowering — 8 sheaves — 16" (40.6 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, boom hoist kick-out limit switch and flood lights available. Detachable for transporting with quick disconnects for hydraulic and electrical systems.



#### 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, master switch, engine start, starting aid and lights, included are gauges for upper hydraulic oil pressure, fuel level, engine water temperature, oil pressure, ammeter, hourmeter, drum brake pressure, converter oil charging pressure and temperature, modulated clutch control lever, trouble light receptacle and drum turn indicators.

**HYDRAULIC SYSTEM:** Full flow hydraulic system for infinitely variable pressure to front and rear drums, boom hoist brakes and clutches. System at 1550 psi (108.5 kg/cm<sup>2</sup>) line pressure. Response is instant, positive and smooth to operators light touch. Pumped fluid is filtered, stored in accumulator under pressure, cooled in 9 gallon (34 liter) reservoir and filtered again before returning to pump.





#### BOOM HOIST:

Independent planetary gear type with external ratchets and automatic brakes provides for raising and lowering boom under power and locking boom. Driven from left transmission.

**TWIN DRUMS:** 20" (50.8 cm) P.D. x 12.375" (31.4 cm) long. Total wire rope length per drum for 1" (25 mm) rope is 536 ft. (163.4 m) storage or 442 ft. (134.7 m) working length.

	Gear Range	Low	High
		HOISTING:	Line Speed
	Line Pull	29550 lb. (13404 kg)	11826.3 lb. (5364 kg)
LOWERING:	Line Speed	32.7 ft./min. (10 m/min.)	82.2 ft./min. (25 m/min.)

 **CLUTCH SIZE:** 52" (132 cm) dia. x 4" (10.2 cm) wide, band type, external contracting.

 **BRAKE SIZE:** (2) - 30" (76.2 cm) dia. x 4" (10.2 cm) wide, band type, external contracting "full wrap" design.




**DRUM ASSEMBLY:** Tandem, anti-friction bearings, driven from fly-wheel end of engine through modulated clutch torque converter and two speed (right) transmission, both drums overwinding.


**FRONT AND REAR:**


**1.25" ROPE:** 28.25" (71.8 cm) P.D. x 40.5" long (102.9 cm) grooved drum. Total wire rope length of 1.25" (32 mm) dia. rope is 1628 ft. (496.2 m) storage or 1603 ft. (488.6 m) working length. Lifts in excess of 500,000 lb. require 12 part reeving with special 1.25" rope with minimum breaking strength of 87.5 tons.

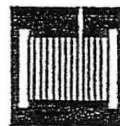
**1.0" ROPE:** 28" (71.1 cm) P.D. x 40.5" long (102.9 cm) grooved drum. Total wire rope length of 1" (25 mm) dia. rope is 1979 ft. (603.2 m) storage or 1603 ft. (488.6 m) working length.

TORQUE CONVERTER RANGE (Based on 70% Efficiency Pts.)			REAR DRUM RANGE Low - High	FRONT DRUM RANGE Low - High
HOISTING: 1.25" Rope	Low Gear	Line f/min	56.6-198.5	56.6-198.5
		Speed m/min	17.3-60.5	17.3-60.5
	High Gear	Line lb.	127100-35670	118800-33350
		Pull kg.	57653-16180	53888-15128
HOISTING: 1.0" Rope	Low Gear	Line f/min	56.4-196.8	56.4-196.8
		Speed m/min	17.2-59.9	17.2-59.9
	High Gear	Line lb.	128413-36080	120750-33928
		Pull kg.	58248-16366	54772-15390
LOWERING: 1.25" Rope	Low Gear	Line f/min	30.9-107.9	30.9-107.9
		Speed m/min	9.4-32.9	9.4-32.9
	High Gear	Line f/min	68.8-240.4	68.8-240.4
		Speed m/min	20.9-73.2	20.9-73.2
LOWERING: 1.0" Rope	Low Gear	Line f/min	30.6-106.9	30.6-106.9
		Speed m/min	9.3-32.6	9.3-32.6
	High Gear	Line f/min	68.2-238.1	68.2-238.1
		Speed m/min	20.7-72.6	20.7-72.6

 **CLUTCH:** (Front and rear) - 46" (116.8 cm) dia. x 6" (15.2 cm) wide, band type, internal expanding.

 **BRAKE:** (Front and rear) - 52" (132 cm) dia. x 8" (20.3 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:** Rapid, safe lowering through reverse planetary gearing in drum, transmission and engine. External spider brake on drum engages planetary gears. (Optional for either drum).



**THIRD DRUM: (OPTIONAL)**

**ASSEMBLY:** Hydrostatic drive, fixed displacement pump mounted on converter power take-off; manual controls; quickly detachable, does not interfere with crane or machine functions. Mounted forward of front drum on revolving frame on center line of boom. Approximate 50 gal. reservoir.

**DRUM:** 12.75" (32.4 cm) P.D. x 16" (40.6 cm) long. Total wire rope length of 3/4" (19 mm) rope is 667 ft. (203.3 m) storage or 547 ft. (166.7 m) working length.


**LINE SPEED:** 87 ft./min. (26.5 m/min.).


**LINE PULL:** 15100 lb. (6849 kg).



**SWING GEAR:** 132 internal cut teeth, 88" (223.5 cm) P.D.

Gear Range	Low	High
Swing Speed	1.2 rpm	3.1 rpm

 **CLUTCH:** (2) - 27" (68.6 cm) dia. x 6" (15.2 cm) wide, electro-magnetic "Magnetorque". Powered by engine driven alternator. Bevel and spur gear driven from front of engine.

 **BRAKE:** 18" (45.7 cm) dia. x 2.5" (6.4 cm) wide, band type, external contracting. Hydraulic release, spring set.

**FASTENING TO LOWER:** Roller bearing "Swing Circle"® 105.315" (267.5 cm) dia., detachable, with integral swing gear.

**COUNTERWEIGHTS:** Bustle - 90,000 lb. (40,824 kg) - Cast, 3 piece, located behind rear of upper machinery cab. Removable with gantry - pin connected.

**CARRIER: 8 Wheels, 4 Wheel Drive, 12 Tires**



**POWER PLANT**

Description	Standard
Engine make	Cummins
Model number	VT-1710B (525)
Type	Diesel
No. of cylinders	12
Bore x stroke, in.	5.5 x 6
Displacement, cu. in.	1710
Cycle	Four
Air induction	Turbocharged
Cooling	Liquid
Starting	24 volt
Charging	12 volt - 75 amp alternator
Compressor, air	30 cfm
Governor, air	105 to 120 psi
Horsepower, gross	525 hp @ 2100 rpm
Altitude Range	0-12,000
In Ft. (m)	(0-3657)
Temp. Range in F.	-20° to 110°
(C.)	(-28° to 43°)

**Fuel tank capacity** 130 gallons (492 liters). Meets FHWA requirements. Optional 130 gal. for 260 gal. (984 liter) total capacity.

**Radiator:** Liquid type, rubber mounted, vertical tube and fin type core. Thermostat temperature control. Dearation baffle in top of tank.

**Air cleaner** - Farr, dry type, 2 stage.

**Starting aid** - Required below 14°F. (-10 C.) ether-measured shot.

**Batteries** - (2) - 12 volt H.D. rated, 8-D series, series and parallel connected. 215 amp hours @ 20 hour rate.

TRANSMISSION	MAIN	AUXILIARY
Make	Detroit Diesel Allison	Spicer
Model	CLBT-5960	1241-C
Type	Power shift with TC-690 torque converter	Air shift
	six (6 forward speeds w/ lock-up mode and integral retarder	4-speed

**PROP. SHAFTS:** Front and interaxle prop shaft — Spicer 1710 series. Intermediate prop. shaft — Spicer 1810 series.

**FRAME:** Front section is fabricated channel. Rear section is a fabricated box section 24 inches deep, crossbraced and reinforced. Front bumper of bent plate. High strength low alloy steel plate used extensively.

**BODY:** Cab, engine hood, front and side panels, equipment boxes and dirt shields formed from sheet steel. Body floor plate and battery box 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 gauge, hourmeter, voltmeter, coolant temperature gauge, engine oil pressure gauge, fuel level gauge and switches), air horn, dome light, amber rotary light, Bostrom T-bar seat with seat belt and West Coast mirror (both sides). 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, maxi-brakes set and hydraulic circuit warning lights.

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



#### FRONT AXLE:

**FRONT:** Anderson-Bolling in tridem. 115.5 in. (2.94 m) track.

**REAR:** Clark BD-91000 planetary drive axles in tridem. 111 in (282 m) track. 12.00 to 1 total ratio. No inter-axle differential.



#### BRAKES:

**Service** — Dual air brake circuit with front and rear brakes on separate circuits. Front linings: 16.5 in. (41.9 cm) diameter by 6 in. (15.2 cm) wide (1350 sq. in (8720 cm<sup>2</sup>) total front lining area), 24 sq. in. (155 cm<sup>2</sup>) air chambers. Rear linings: 20 in. (50.8 cm) diameter by 7 in. (17.8 cm) wide (1800 sq. in. (11620 cm<sup>2</sup>) total rear lining area), 36 sq. in. (232.5 cm<sup>2</sup>) air chambers. Total brake lining area — 3150 sq. in. (20340 cm<sup>2</sup>). (Std. Rockwell Axles.)

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

**SUSPENSION** — **FRONT & REAR:** Hendrickson solid mounted tridem suspension with torque rods.

**TIRES:** Eighteen (18) 1400 x 24-N load range (24-PR). On-off highway tread, on Goodyear 1024 MD rims.



#### OUTRIGGERS:

Four (4) fabricated independent boxes of high strength low alloy steel plate. Front and rear boxes are pin connected and removable.

**OUTRIGGER BEAMS:** Four (4) fabricated reinforced box section beams of high strength low alloy steel plate. Beams telescope to fully extended position of 144" (3.66 m) from longitudinal center of carrier to center line of float.

**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.

**FLOATS:** Five (5) aluminum floats 48 x 48 inches (1.2 x 1.2 m).

**MISCELLANEOUS EQUIPMENT:** Tire inflation valve and hose and special tools.

#### OPTIONS:

**Upper:** Rapid refueling system, lighting (and container steering) system with 6 KW generator or 12 KW generator, audio-visual drum turn indicators, elevated cab (30 or 40 foot), wind velocity indicator, positive swing lock, hoist limit switch, signal horn, rotary warning light for boom point, windshield wiper and heater-defroster. Container accessories include hydraulic and radio-controlled spreaders.

**Carrier:** Additional 130 gal. (505 L) fuel tank, auxiliary rear outriggers (required for all boom lengths over 240') (73.2 m), 30,000 lb. front bumper counterweight (required for boom-jib combinations over 320') (97.7 m), audio back-up alarm, spare 1024 MD rim, 14' (4.27 m) extension outrigger beam, low-profile 4' x 4' floats, 5' x 5' steel floats, "Malkiel" floats, beam floats and tri-floats.

## ATTACHMENTS



#### STANDARD BOOM:

Two-piece 70' (21.3 m) long, open throat lattice type tubular boom consisting of a 40' (12.2 m) long tapered base section and a 30' (9.1 m) long heavy duty tapered tip section. All boom sections are pin connected, have a 94" (239 cm) square 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. Other tip sections are optional.

**HEAVY DUTY TIP:** 30' (9.1 m) has 6 offset boom point sheaves 30" (76.2 cm) P.D., with roller bearings. Required for lifts up to 600,000 lbs. (272,160 kg). Boom extendible to 240' (73.2 m).

**LIGHT DUTY TIP:** 30' (9.1 m) long section has 3 offset boom point sheaves 30" (76.2 cm) P.D. with roller bearings. Required for long boom work from 250' to 320' (76.2 m to 97.5 m) for lifts up to 250,000 lbs. (113,400 kg). Optional.

**HAMMERHEAD TIP:** 20' (6.1 m) long section has 6 offset boom point sheaves 30" (76.2 cm) P.D. with roller bearings. Extra heavy duty tip of short length for minimum headroom clearance and lifts up to 500,000 lbs. (226,800 kg). Boom extendible to 250' (76.2 m). Optional.

**CONTAINER TIP:** 30' (9.1 m) long section has 4 boom point sheaves (2 each side) 27" (68.6 cm) P.D. with roller bearings for single or double drum operation. Double hoist lines keep container level and straight for precise placement. Boom extendible from 130' minimum to 220' (39.6 to 67m) for lifts up to 160,000 lbs. (72,576 kg). Optional.

**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:** 30' (9.1 m) long jib, open throat lattice type, two equal tapered sections, pin connected, having a 42" (106.7 cm) square cross section and with single 18.75" (47.6 cm) P.D. jib point sheave, compression strut and guy cables assemblies. Extendible to 80' (24.4 m). Extends reach to 402' (122.5 m). For lifts not exceeding 50,000 lb. (22,680 kg). Optional.

#### JIB INSERT SECTIONS:

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

**MAST:** Required for light duty booms 250 ft. (76.2 m) or longer, improved ratings for hammerhead booms and for heavy duty boom/over rear/600,000 lb. lifts. Mast is 45' (13.7 m) long and is attached to boom foot during operation. (Optional).

**MID-POINT SUSPENSION:** Required when boom length is 250 ft. (76.2 m) or longer. (Optional).

**BOOM HOIST REEVING:** 14 parts line, 1" (25 mm) wire rope.

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



**WIRE ROPE GUIDE ROLLERS:** Use as required to eliminate wire rope interference. (Optional).

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

	Boom Hoist	Front 1.25" Rope	Rear 1.25" Rope	Third
Sheave to Wire Rope	16 to 1	24 to 1	19.6 to 1	—
Drum to Wire Rope	20 to 1	22.6 to 1	22.6 to 1	17 to 1

	Front 1.0" Rope	Rear 1.0" Rope	Rear Container 1.0" Rope
Sheave to Wire Rope	27 to 1	18.75 to 1	27 to 1
Drum to Wire Rope	28 to 1	28 to 1	28 to 1

**HOOK BLOCKS:**

Block Capacity	Number Sheaves	Wire Rope Size	Weight	Rope to Sheave Ratio	Part No.
41,700 lb. (18,915 kg)	1	1 1/4"	2300 lb. (1043 kg)	21.4 to 1	8U7-D68 (opt.)
125,000 lb. (56,700 kg)	1	1 1/4"	2500 lb. (1134 kg)	21.4 to 1	8U7-D62 (Standard)
208,400 lb. (94,530 kg)	2	1 1/4"	3040 lb. (1379 kg)	21.4 to 1	8U7-D75 (opt.)
291,700 lb. (132,315 kg)	3	1 1/4"	3190 lb. (1447 kg)	21.4 to 1	8U7-D61 (opt.)
375,000 lb. (170,100 kg)	4	1 1/4"	4190 lb. (1900.6 kg)	21.4 to 1	8U7-D73 (opt.)
458,400 lb. (207,930 kg)	5	1 1/4"	6400 lb. (2903 kg)	21.4 to 1	8U7-D74 (opt.)
500,000 lb. (226,800 kg)	6	1 1/4"	5600 lb. (2540 kg)	21.4 to 1	8U7-D56 (opt.)
600,000 lb. (272,160 kg)	6	1 1/4"	6675 lb. (3028 kg)	21.4 to 1	8U7-D53 (opt.)
23,200 lb. (10,524 kg)	Weighted Hook		1100 lb. (499 kg)	—	8U7-D512 (Jib-Opt.)
80,100 lb. (36,333 kg)	1	1"	790 lb. (358 kg)	18.375 to 1	8U7-D30 (Jib-Opt.)
53,400 lb. (24,222 kg)	1	1"	1435 lb. (651 kg)	21.5 to 1	8U7-D58 (Standard Container)
133,500 lb. (60,556 kg)	2	1"	1745 lb. (792 kg)	21.5 to 1	8U7-D76 (Optional Container)
160,000 lb. (72,576 kg)	3	1"	2280 lb. (1034 kg)	21.5 to 1	8U7-D59 (Optional Container)

**WEIGHTS:**

Carrier — Including Swing Circle®, hydraulic outriggers, floats and standard tires — 127,420 lbs. (57,800 kg).

Upper machine — 110,578 lb. (50,158 kg).

Mast — 5080 lb. (2304 kg)

Gantry — 5416 lb. (2457 kg)

Bustle counterweight — 90,000 lb. (40,824 kg)

**Boom:**

Base — 9475 lb. (4298 kg)

Inserts — 10 ft. — 1551 lb. (703.5 kg)

20 ft. — 2652 lb. (1203 kg)

30 ft. — 3272 lb. (1484.2 kg)

50 ft. — 5183 lb. (2351 kg)

Tip — Heavy Duty — 7600 lb. (3447.4 kg)

Light Duty — 6187 lb. (2806.4 kg)

Hammerhead — 7764 lb. (3521.8 kg)

Container — 7163 lb. (3249 kg)

**Jib:**

Base — 650 lb. (294.8 kg)

Inserts — 10 ft. — 460 lb. (208.7 kg)

20 ft. — 700 lb. (317.5 kg)

30 ft. — 890 lb. (403.7 kg)

Tip — 830 lb. (376.5 kg)

**PERFORMANCE:**

**PERFORMANCE — ON HIGHWAY:** 18 forward speeds, 3 reverse speeds. Performance in highest and lowest gear based on engine at full load and class 1 good surface road and 125,000 lbs. (56,700 kg) G.V.W. (carrier less upper) lowest gear 5.1 mph (8.2 km/h) on 19.7% grade, highest gear - 46.9 mph (76 km/h) on 0.5% grade.

**OFF-HIGHWAY:** 6 forward speeds, 1 reverse speed. Performance in lowest gear ratio based on 354,000 lbs. (160,400 kg) G.V.W. (basic machine with 70 ft. (21.3 m) boom), converter 70% efficiency point and class II good road - 0.9 mph (1.4 km/h) on 25% grade.

# OVER SIDE & REAR RATINGS

## MODEL 6250 . . 250 TON TRUCK CRANE . . PCSA 18-1775

This P&H Model 6250 T.C. meets the requirements of ANSI B30.5-1968. Boom structure has been tested per SAE 1987. Machine stability has been tested per SAEJ765.

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 a combination of P&H manufactured upper, boom, jib, and counterweights mounted on a P&H carrier and outriggers. Boom backstops are required for all boom lengths. Boom inserts must be arranged as shown in the boom make-up chart. Standard boom hoist reeving is 14 part line. Ratings apply to full 360 degree operation when front float is in place, otherwise only over sides and rear.

Ratings shown are based on freely suspended loads and make no allowance for such factors as wind effect on lifted load, ground conditions, out-of-level, operating speeds or any other

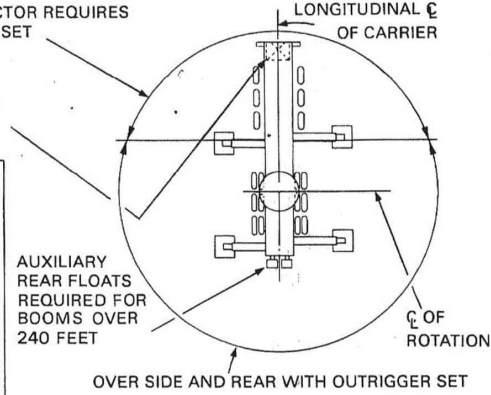
condition that could be detrimental to the safe operation of this equipment. The operator, therefore, has the responsibility to judge the existing conditions and reduce lifted loads and operating speeds accordingly. Deduct weight of hook, block(s), slings, cement bucket and all other load handling accessories from main boom or jib rating shown. Ratings do not exceed 85% of tipping load as determined by SAEJ765. Ratings shown are based on a total of three counterweights of 30,000 lbs. for a total of 90,000 lbs. Maximum travel speed with 70 ft. boom over carrier rear, is 2 M.P.H. with counterweights installed, and 12 M.P.H. without counterweights installed, based on tire manufacturers ratings.

Basic guy ropes for boom lengths are made up of 1 set of 25'-1" guy ropes and matching insert guy ropes plus an additional 7'-0" guy rope for booms 70 to 150 ft. long; use 5'-0" guy ropes for 160 to 320 ft. long. † See Plate 32R162 for chart. \* See Plate 32R208 for greater ratings over the rear only.

BOOM UPPER SECTION	LOAD RATING DEDUCT†	MAX. BOOM LENGTH	MAX. BOOM & JIB LENGTH	MAST REQUIRED	INTERMEDIATE SUSPENSION	MAX. RATING
Light Duty 3 Sheave Tip (30 Foot)	0 Lbs.	320 Feet	320 Ft. Boom + 80 Ft. Jib	250 Feet and Over	250 Feet and Over	250000 Lbs.
Heavy Duty 6 Sheave Tip (30 Foot)	1500 Lbs.	240 Feet	240 Ft. Boom + 80 Ft. Jib	Not Required	Not Required	500000 Lbs.*

OPERATION IN THIS SECTOR REQUIRES FRONT BUMPER FLOAT SET

FRONT BUMPER FLOAT



### WARNING READ FOR SAFETY

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.

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. The jib is 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.

The wind effect on the lifted load can cause sufficient side load to over stress boom structure. When suspended load will not stay 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.

When assembling boom inserts, do not cantilever more than two inserts, or 80 ft. of inserts past point of pendent rope attachment to boom. Relocate point of pendent rope attachment out on boom as additional inserts are added.

Welding or other repair to tubular steel boom may weaken the structure. See a P&H dealer for authorized boom repairs. Unauthorized boom repair will void all warranties.

Side outriggers must be fully extended and set to rotate upper with counterweights attached or machine will tip over.



32R160

## STANDARD CRANE RATINGS OVER SIDE AND REAR PCSA CLASS 18-1775

- NOTES:
1. RATINGS ABOVE HEAVY LINE ARE GOVERNED BY FACTORS OTHER THAN STABILITY.
  2. RATINGS AT 30 FT., OR LESS OPERATING RADIUS ARE FOR THE HEAVY DUTY TIP. (USE 250,000 LBS. FOR THE LIGHT DUTY TIP)
  3. RATINGS AT 35 FT., OR GREATER OPERATING RADIUS ARE FOR LIGHT DUTY; DEDUCT 1500 LBS. FOR HEAVY DUTY TIP RATING.

Oper. Rad. Ft.	Angle	70 Ft. Boom		80 Ft. Boom		90 Ft. Boom		100 Ft. Boom		110 Ft. Boom		120 Ft. Boom		130 Ft. Boom		140 Ft. Boom		150 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.	Rating Lbs.	Boom Pt. El.	Rating Lbs.																			
18	79	79.5	500000																	18																		
20	78	79.1	455000																	20																		
25	73	77.9	360000	76	88.2	359600	77	98.5	359200	78	108.7	358800								25																		
30	69	76.2	280400	72	86.8	280000	74	97.2	279700	76	107.6	279300	77	117.9	279100	78	128.1	278600	79	138.3	278300	80											30					
35	65	74.2	217900	68	85.0	217500	71	95.7	217200	72	106.2	216700	74	116.6	216500	76	126.9	216000	77	137.2	215600	78	147.5	215400	78	157.7	214900											35
40	60	71.6	177500	64	82.9	177000	67	93.8	176700	70	104.5	176200	71	115.1	175900	73	125.6	175400	74	136.0	175000	76	146.3	174800	76	156.6	174300											40
45	55	68.4	149400	60	80.2	148900	64	91.5	148500	66	102.5	148000	69	113.3	147700	70	124.0	147300	72	134.5	146900	73	145.0	146600	74	155.3	146200											45
50	50	64.6	128600	56	77.1	128000	60	88.9	127600	63	100.2	127000	66	111.3	126700	68	122.1	126200	70	132.8	125800	71	143.4	125500	72	153.9	125100											50
60	38	54.2	100100	47	69.1	99500	52	82.2	99100	57	94.5	98400	60	106.2	98200	63	117.6	97700	65	128.7	97300	67	139.6	97000	68	150.4	96500											60
70	22	36.7	81500	36	57.6	80800	44	73.2	80400	50	87.0	79800	54	99.7	79500	57	111.8	79100	60	123.5	78700	62	134.9	78400	64	146.1	78000											70
80				20	38.5	67600	34	60.7	67100	41	77.1	66500	47	91.5	66200	51	104.7	65700	55	117.2	65300	58	129.2	65000	60	140.9	64500											80
90							19	40.3	57300	32	63.6	56600	39	80.8	56300	45	95.7	55800	49	109.4	55300	53	122.2	55000	56	134.6	54600											90
100										18	41.9	48900	30	66.3	48600	38	84.3	48100	43	99.7	47700	47	113.8	47300	51	127.1	46900											100
110												17	43.4	42600	29	68.9	42000	37	89.3	41300	42	105.0	41200	46	119.3	41100											110	
120															19	48.9	37800	29	73.8	37400	36	92.5	37100	41	108.7	36700											120	
130																	18	50.5	33200	28	76.3	32900	34	95.7	32500												130	
140																			17	52.0	29300	27	78.7	28900													140	
150																																						150

SEE CHART 32R161 FOR FURTHER RATINGS.

32R160

MAIN HOIST DRUM RATED LOADS FOR 1 1/4" DIA. TYPE 25 WIRE ROPE						
Number of Parts of Main Hoist Reeving	1	2	3	4	5	6
Maximum Load — Lbs.	41,700	83,000	125,000	166,700	208,400	250,000
Number of Parts of Main Hoist Reeving	7	8	9	10	11	12
Maximum Load — Lbs.	291,700	333,400	375,000	416,700	458,400	500,000

WARNING:						
When boom is equipped with jib, main hook ratings must be reduced to compensate for jib attachment weight.						
Jib Length	30 Ft.	40 Ft.	50 Ft.	60 Ft.	70 Ft.	80 Ft.
Deduct — Lbs.	3500	4200	4600	5000	5700	6200

Courtesy of CraneMarket

