

## **Rough Terrain Crane**

### **40 Ton (36.3 Tonnes) Capacity**

### **162 Feet (49.4 m) Max. Boom and Extension**

- **Full Power 4-Section Boom:** 110 ft. (33.5 m) single lever, fully synchronous with each section of 4 plate construction, welded inside and out. No derate for duty cycle work.
- **Lattice Extensions:** 31 ft. swing-away with or without a bi-folding 21 ft. lattice extension for a total of 52 ft. Offsettable to 17 or 30 degrees for up and over reach. Self storing pins allow for easy erection from the ground.
- **Easy Ride:** Boom stabilizing system absorbs vertical boom oscillation for a more comfortable ride and reduced wear and tear on the crane.
- **Matched P&H Winches:** Bent axis motors give you smooth operation and precise meterability with infinitely variable speed control. Maximum line pull is 17,100 pounds.
- **Powershift Transmission:** Fully sequential shifting with 6 speeds forward and 3 reverse. Shifter is column mounted for convenience.
- **Operator's Cab:** Independently mounted cab has all the P&H comforts: tilt, telescoping steering wheel; joysticks or armrest mounted levers; fully adjustable seat; opening, tinted windows all around, and common-sense gauge and switch layout.
- **Three Steering Modes:** Front wheel, 4-wheel coordinated crab or crab—all controlled by the steering wheel.
- **LMI:** Electronic load moment device is standard equipment. It gives you precise crane operation information under any load conditions.
- **Three Outrigger Positions:** Set the outriggers straight down, at the mid-point, or fully extended. You have the option for optimum set up on a congested work site.
- **PRIDE Plus**  The Pride Plus warranty . . . the most comprehensive warranty in the business. Our standard warranty covers the entire crane for 12 months or 2000 hours of operation, whichever comes first. Major weldment structures are covered for 5 years or 10,000 hours of operation.



## **Specifications**

# Specifications

This P&H crane meets the requirements of ANSI B30.5 (1987). Boom structure (boom and lattice extension) has been tested per SAE J1063, machine stability tested per SAE J765.



**Boom:** 34 ft. (10.4 m) retracted to 110 ft. (33.5 m) extended length, four section boom consisting of a boom base, and three hydraulically extended and retracted sections. Boom extension is fully synchronized. Boom point has four non-metallic main sheaves and two non-metallic idler sheaves.

Boom elevation from -2° to 78°.

Each section of this rectangular boom consists of four plates welded both inside and out for superior strength. Large, non-metallic slider pads are adjustable. A mechanical boom angle indicator is provided.

**Boom Hoist:** Two cylinders, double-acting. Hydraulically powered raising and lowering with holding valve. Cylinder has internal accumulator providing a stabilizing "Easy Ride" when roading the machine.

**Boom Telescope:** One double-acting telescoping cylinder and one two-stage double-acting telescoping cylinder provide synchronized hydraulically powered extending and retracting with holding valve.

**Counterweight:** 10,250 lbs. (4660 kg)

## BOOM OPTIONS:

**Lattice Extensions:** 31 ft. (9.5 m) swingaway lattice structure with a single metallic sheave. It can be put into operating position by pivoting from its stored position on right side of boom base section. Self storing pins connect extension to boom head. In the operating position the extension is offset 3° from the main boom. Includes anti-two block device. Available with 21 ft. (6.4 m) swing around lattice structure mounted to tip of 31 ft. (9.5 m) lattice extension making a total length of 52 ft. (15.9 m).

**Offset Mechanism:** Pivoting links which allow lattice extension to offset 17° or 30° from the main boom.

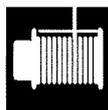
**Auxiliary Boom Point Sheave:** Boom point mounted with single metallic sheave, includes anti-two block device.



**Operator's Cab:** Fully enclosed, all-weather environmental steel cab with hinged tinted ceiling window, sliding side and rear windows, locking sliding door with full view in all directions. Tinted safety glass used throughout. Operator's cloth covered, six-way adjustable seat has torsion suspension and seat belt. Cab is cushion-mounted for vibration dampening and noise reduction.

**Cab Equipment:** Contains all roading and crane function controls. Front control console includes gauges for engine water temperature, engine oil pressure, transmission oil temperature, hydraulic oil temperature, air pressure, and fuel. Also

includes hourmeter, speedometer, tachometer, voltmeter, winch high speed indicator, anti-two block warning device and electronic load moment indicator, and dash lights. Additional cab equipment includes windshield wiper and washer, defroster fan, interior cab light, fire extinguisher, machine level gauge, rear steer centering light, check gauges indicator, brake warning indicator, electric horn, parking brake, hand throttle and swing lock. Armrest mounted joystick or short lever controls for swing, auxiliary winch, main winch, and boom hoist. Foot pedals for swing brake, boom telescope, service brakes and engine throttle. The shifter for transmission is on the steering column.



**Winch:** P&H 1580 two speed with bent axis piston motor mounted to rear of revolving frame. Planetary gearing with equal speed power raising and lowering. Infinitely variable speed control. Spring applied, hydraulically released load holding multi-disc brake is automatic. Complete with 460' (140 m) of 3/4" (19 mm) wire rope, and drum turn indicator.

**Drum:** 15" (381 mm) diameter x 18.5" (479 mm) wide with 23.5" (597 mm) diameter flange.

**Wire Rope:** 3/4" (19 mm) diameter 6 x 37 extra improved plow steel with 7 x 7 IWRC.

**Drum Capacity:** 554 ft. (168 m) x 3/4" (19 mm) wire rope, 5 layers.

**Line Pull (max.):** 17,100 lbs. (7755 kg) 1st layer, low speed.

**Line Pull (permissible):** 11,000 lbs. (4991 kg) per part of line.

**Line Speed (max.):** 547 fpm (166 mpm) fifth layer.

## HOISTING OPTIONS:

**Auxiliary Winch:** P&H 1580 same as main winch. Wire rope is optional.

**Auxiliary Winch Wire Rope:** 460' (140 m) of 3/4" (19 mm) diameter 6 x 37 extra improved plow steel with 7 x 7 IWRC or 8 x 19 extra improved plow steel with 7 x 7 IWRC spin resistant.

**Cable Spooling Device:** For main or auxiliary winch.

**Hook Block:** 40 ton (36.3 tonne) with 4 sheaves, or 20 ton (18 tonnes) with one sheave.

**Headache Ball:** 8.5 ton (7.7 tonne) weighted hook with swivel.



**Swing:** 360° continuous rotation to 2.7 RPM. External cut spur gear slewing ring.

**Swing Brake:** Spring applied, hydraulically released, internal disc brake, integral with swing reducer.

**House Lock:** Manually engaged 360 degree house lock.

**Fastening to Lower:** Single row ball bearing integral with swing gear. Bolted to carrier and rotating frames. Bearing is protected from dust by labyrinth seal.

**Rotating Manifold:** Sealed rotary swivel and hydraulic hose connections between rotating upper and carrier; removable from above or below for servicing. Electrical swivel is mounted on top of air and hydraulic swivel.

**Electrical System:** 24 volt negative ground. Wiring harnesses have protective covering and are independently clamped to the framework, and have environmentally sealed Deutsch connection. Two 8D batteries.

**Hydraulic System:** System uses two tandem gear type pumps with a total flow of 141 gpm (534 lpm). Filters include two return line filters, 7 micron (nominal), externally mounted directly to the reservoir. One pressure line filter, 20 micron (nominal) in outrigger circuit. All return oil is filtered.

**Pump Drive:** Gear driven integral with transmission off rear of torque converter housing, with manual pump disconnect.

**Oil Reservoir:** 129 gallons (488 liters) capacity.

**Oil Cooler:** Oil to air, tube and fin type with internal turbulator.



**Carrier:** P&H 4 x 4 x 4, 10 ft. 6 in. (3.2 m) wide, 26 ft. 5 in. (8 m) long.



**Outriggers:** Hydraulic, independent, out and down type to raise all four wheels clear of the ground. Control is from the cab. Each vertical cylinder is equipped with a holding valve. The outriggers may be set in three positions for optimum setup on congested job sites. Capacity charts are provided for each position. Outriggers are single stage with an extension of 23 feet (7 m). Front to rear spread is 23 ft. 1 in. (7 m).

**Outrigger Floats:** Individually removable floats with storage on carrier. Float size 21" (533 mm) diameter with effective nominal surface area of 452 sq. in. (2920 sq cm) per float.

**Axles:** Planetary drive/steer front and rear. Rigid mounted front axle. Rear axle is pivot mounted with automatic hydraulic lockout cylinders. Maximum oscillation: ±5.5 in. (140 mm).

**Service Brakes:** Air over hydraulic brakes on all four wheels. Caliper disc type with front and rear on separate circuits.

**Parking Brakes:** Spring set/air released disc brake on transmission output shaft.



**Steering:** Hydrostatic power steering, front and rear axles. Control modes for front only, four wheel crab and crab steering, all controlled by the steering wheel. Switch for independent rear steer. Minimum turning radius is 20' 5" (6.2 m)

**Tires:** 23.5 x 25-20PR tubeless with rock tread (E-3)

**Tire Options:** 26.5 x 25-26PR tubeless with rock tread (E-3)  
21:00 x 25-20PR tubeless with sure-grip tread (E-2)  
Spare wheels and tires.  
Tire inflation kit.



## Power Plant:

<b>Make:</b>	Cummins
<b>Model:</b>	6BTA5.9
<b>Type:</b>	4 stroke diesel
<b>Horsepower:</b>	177HP (132 kw) @ 2500 rpm
<b>Aspiration:</b>	Turbocharged, aftercooled
<b>Cylinders:</b>	Six, 4.02 in. (102 mm) bore x 4.72 in. (135 mm) stroke.
<b>Displacement:</b>	359 cu. in. (5.88 liters)
<b>Alternator:</b>	24 Volt, 65 amp.
<b>Electrical:</b>	24 volt system with negative ground
<b>Radiator:</b>	Water to air, tube and fin type core with bottom tank transmission oil cooler. Thermostatically temperature controlled.
<b>Air Cleaner:</b>	Two-stage dry—replaceable element
<b>Fuel Tank Capacity:</b>	60 gals. U.S. (227 liters)

**Transmission:** Fully sequential powershift with torque converter, six speeds forward and three reverse with neutral safety start. Rear axle disconnect.



**Performance:** Theoretical, based on basic machine at 72,000 lbs. Speed and gradeability will vary due to engine performance, vehicle weight and optional equipment. Gradeability based on SAE J688.

**Max. Speed:** 23 mph (37 km/hr)

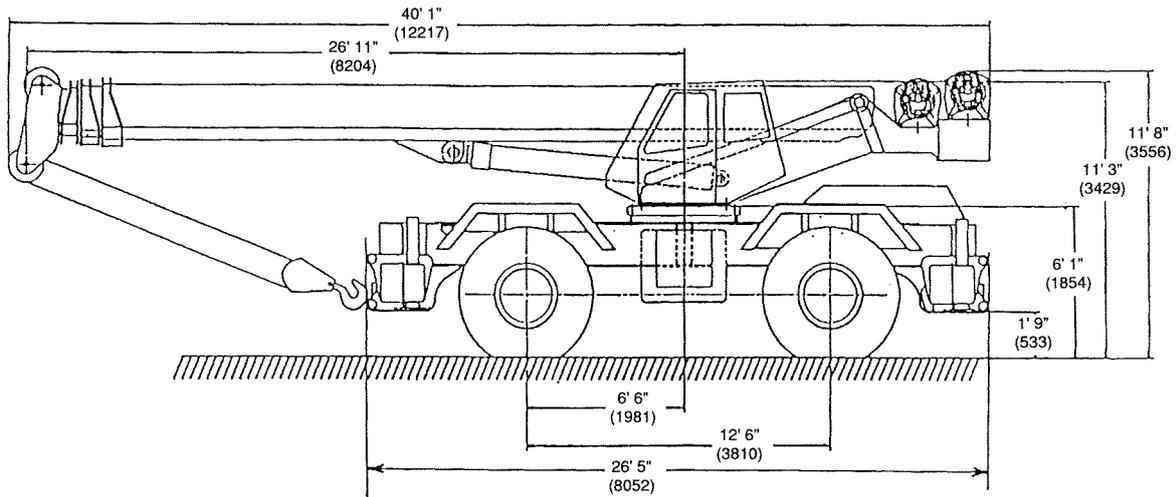
**Max. Grade @ 1 mph (1.6 km/hr):** 54%

**Miscellaneous Equipment (Standard):** Sliding engine hood, front and rear tow lugs, hydraulic pump disconnect, automatic moisture ejector, rear axle drive disconnect, air to oil hydraulic cooler, air dryer, axle lockout with override, headlights, taillights, turn signals and flashers, back-up alarm, rear view mirrors, storage compartment and fire extinguisher.

**Miscellaneous Equipment (Optional):** Engine starting aid, pintle hooks, floodlights, amber beacon, roof wiper, hydraulic air conditioner, and choice of propane, diesel or hydraulic (c/w A.C.) heater.

**NOTE:** Capacity Charts and related lifting data can be found in a separate publication.

## General Dimensions



BASIC MACHINE WEIGHT – approximately 72,000 pounds



NOTE: All designs, specifications and components of the equipment described above are subject to change at the manufacturer's sole discretion at any time and without advance notice. The individual load charts and related lifting data on each crane must be understood and govern operation of the crane. 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 conditions encountered. The only warranty applicable is our standard warranty for this machine.



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