

670-TC



Fast set ups on all types of terrain make quick work of most erecting jobs for the 670-TC.



High-production concrete pouring is made to order for Magnetorque® swingers — fast and smooth cycling with never an adjustment.



Full-Flow Power Hydraulic Controls and power down Boom Hoist spots all loads accurately and safely.



Address inquiries to:

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

P&H

Milwaukee, Wisconsin 53201

P&H

670-TC

70-TON TRUCK CRANE

NAME
CONTRACTORS
NAME
P&H

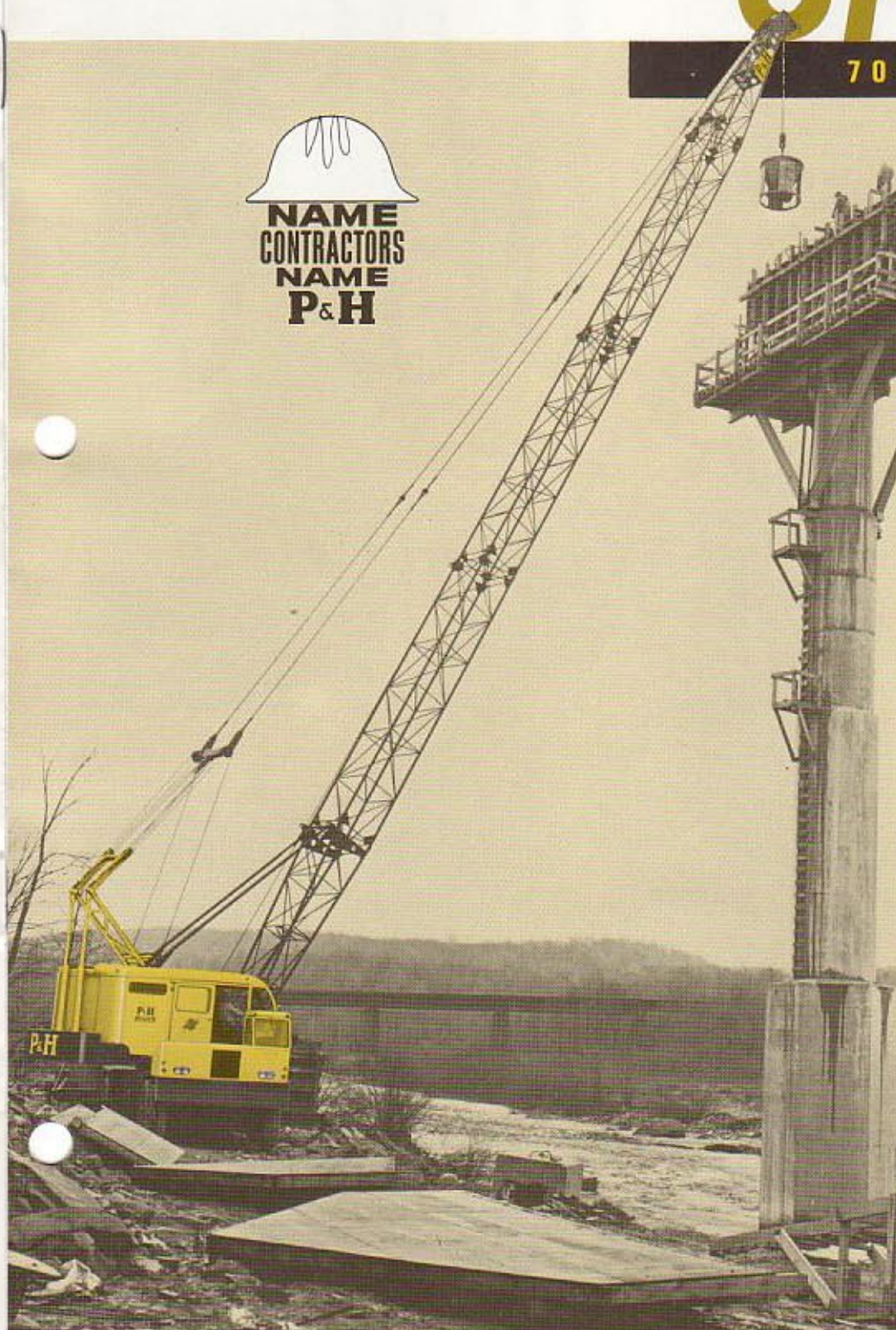
**Only
Harnischfeger
builds as much
high-performance
into a 70-ton Truck
Crane.**

Your investment in the P&H 670-TC will return more high-profit production to you than any 70 ton truck crane ever built . . . by P&H or anyone else. Only in a P&H can you get a 70-tonner like this one . . .

- An upper working structure that will handle any rated load with power, speed, precision and safety. The all-welded, rigid frame encloses all gearing in an oil bath, keeps all shafting in perfect alignment. Controls act instantly, effortlessly — with Full Flow Power Hydraulic drum controls, ultra smooth Magnetorque® swing, power up-and-down boom hoist. Maintenance is minimum.

- A powerful 8 x 4 P&H-built carrier that travels where you want it to — perfectly matched to the upper. P&H double-acting hydraulic outriggers set up fast and provide a steel-on-steel stance over twenty feet wide for a rock-steady working platform on flat or uneven ground. Twenty-speed transmission, air brakes on all wheels, Maxi safety brakes at the rear, planetary drive wheels with inter-axle differential are all standard equipment.

- The finest, strongest construction steel available, with 100,000 lb. tensile strength, gives super strength without excess weight to the carrier frame, outrigger beams and tubular booms. This is unmatched anywhere in the industry.



THE POWERFUL P&H UPPER — ALL-WELDED STRENGTH — FAST — SMOOTH

The one-piece, unitized upper frame is all-welded rolled alloy steel, line-bored for perfect shaft alignment. All gears, chains and shafts run in a continuous oil bath in sealed enclosures. The machinery arrangement is compact, scientifically positioned for balance with a minimum of counterweight. Involute splined shafts and anti-friction bearings are used throughout.

From engine to clutches, this upper is virtually maintenance-free, runs at peak efficiency at all times.



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All-Welded Frame has Strength Without Excess Weight, Line-Bored Shaft Mountings.

Multiple Speed Transmission Handles a Wide Range of Work. See Page 3.

Tandem Drums Have Extra Large Cable Capacity.

Sealed-in-Steel Gear Train is Oil-Bath Lubricated, Trouble-Free. See Page 3.

Sealed Chain Case. Drive Chain Runs in Oil Bath.

Magnetorque® Swingers. Friction-Free, Ultra-Smooth, Adjustment and Maintenance Free. See Page 4.

Full-Flow Power Hydraulic Controls are Precise, Smooth, Extra-Safe. See Page 4.

Planetary Boom Hoist (Not Shown). Power Up and Down for Safety. Never a "Live Boom." See Page 3.

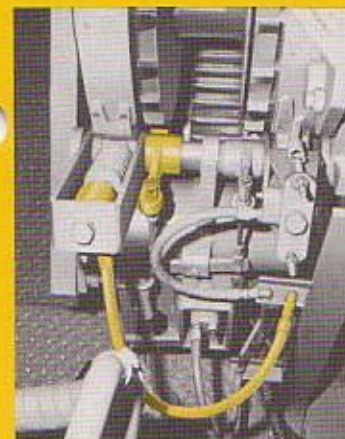
POWER UP, POWER DOWN BOOM HOIST

The safest, most reliable boom hoist design is *standard* on all P&H Cranes and Excavators. The operator has full control, up and down, under power. He never has to use the dangerous practice of lowering a live boom by gravity against a brake. Safety pawls are engaged at all times.



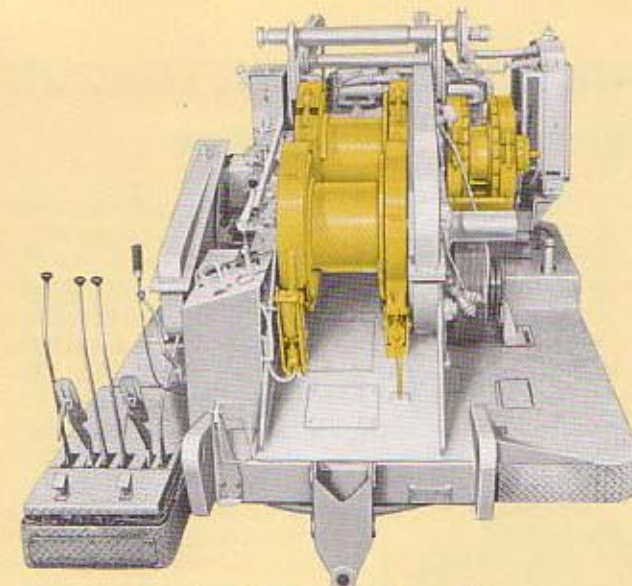
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When the boom hoist control lever is in the neutral position, the cable drum is locked in position by a wide, full-wrap, spring-set brake band and automatic boom hoist pawl.



2

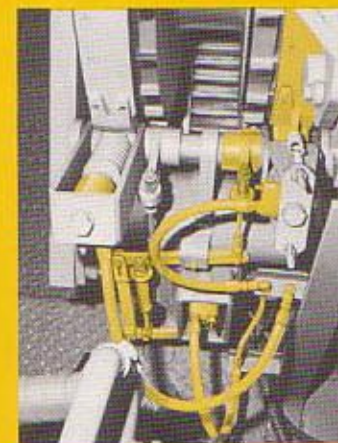
The boom is raised by the boom hoist clutch (not shown). Brake is released by a hydraulic cylinder, but the boom hoist pawl remains engaged to prevent a sudden lowering of the boom should the clutch slip.



Huge Cable Drums Have Added Capacity

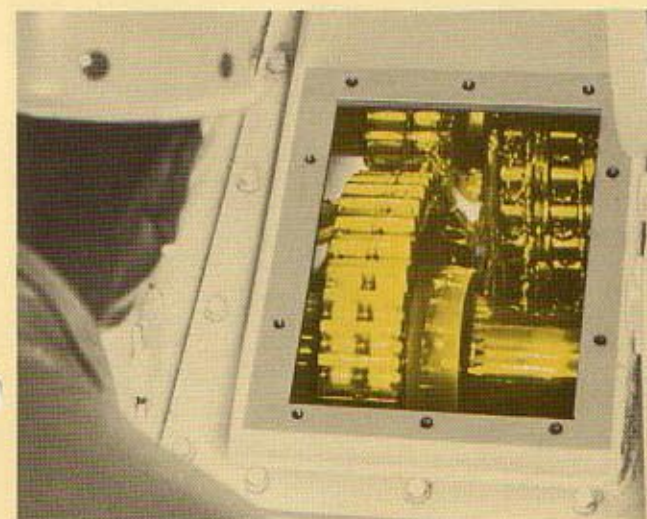
Full-wrap hoist drum brake bands provide extra load handling safety, have spring loaded brakes with double hydraulic cylinders.

Power controlled load lowering through planetary gears is available for both hoist drums for precise, safe control of heavy loads.



3

The boom is lowered by engine power through planetary gears. Hydraulic cylinder at left releases drum brake; lower cylinder shifts pawl arrangement so that hoist pawl is disengaged and planetary pawl is engaged. This prevents the lowering boom from overhauling engine speed. Cylinder at right sets planetary brake band which reverses drum direction through planetary gears.



This is a sight seldom seen by owners of a P&H. A continuous oil bath runs over and through hardened gearing and heavy-duty roller chain. Heavy, bolted-on and gasketed plates seal out grit and contaminants that cause wear. This is the ideal machinery environment and trouble is a rare thing indeed. Oil changes are infrequent — seasonal, at the most, where oil viscosity must be changed to meet climate conditions. We recommend a change every six months, but many P&H owners in warm and dry climates leave oil in the gear case for much longer periods and never have occasion to lift the lid.

3-SPEED TRANSMISSION

Multiple speed transmission is standard on all P&H construction equipment. Second gear is the normal range for most operations, but often slower or faster gear ratios are more convenient and efficient. Heavy lifts that must be handled slowly and precisely will be controlled more easily in low gear. Use high gear for fast, light duty.

EXCLUSIVE MAGNETORQUE® SWINGERS!

replace friction clutches

Model 670-TC as all medium to large P&H truck cranes, have Magnetorque® swingers — the fastest accelerating, smoothest, most trouble-free swing units yet devised. Magnetorque® is exclusive with Harnischfeger and can be found only on a P&H.

The operator has precise control of his swing motion through an infinitely variable range of speeds. With finger tip control, he can "inch it" or jam on full power. Swings are absolutely smooth through the full range of speed and power.

Magnetorque® is an electro-magnetic coupling, with driving

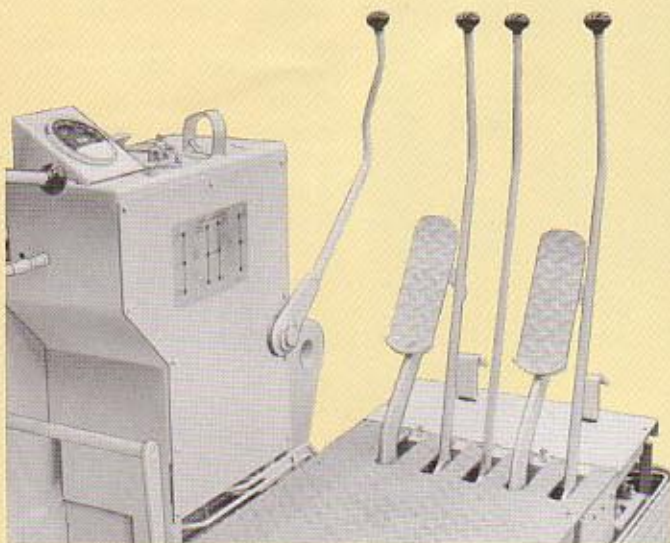


Here's the reason for the silk-smooth swings you get from Magnetorque®. There is no contact between the driving and the driven members. They are separated by an air gap. Power is transmitted by a rotating magnetic field which can be infinitely varied.



Engine-driven alternator supplies power for the twin Magnetorques®. The operator controls the power, in infinite variation, with a simple hand lever.

FULL-FLOW POWER HYDRAULIC CONTROLS SELF-PURGING — SELF-ADJUSTING — EXTRA SAFE

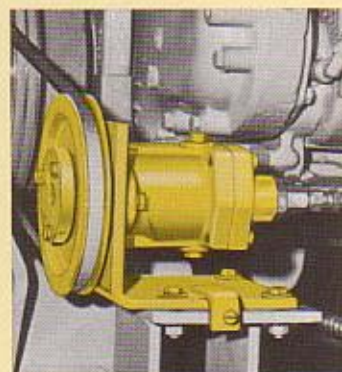


Instant-acting control, maximum load-holding safety are the main features of exclusive P&H Full-Flow Power Hydraulic Controls. The operator has smooth and precise control of every load.

The system is self-adjusting and self-purging. An unlimited supply of hydraulic fluid is constantly recirculated. Trapped air is compressed and eliminated through the reservoir. Fluid is double filtered.

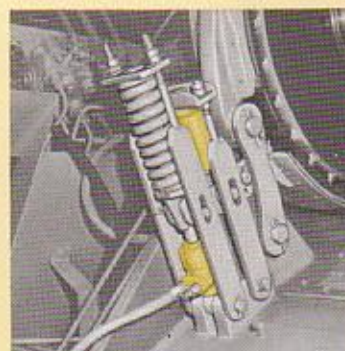
Twin safety features prevent sudden loss of a load in the rare case of oil pressure loss. If the pump output should ever drop, the accumulator will hold sufficient pressure to lower the load safely to the ground. If you should accidentally cut a hydraulic line, spring-loaded drum brakes set automatically and hold until pressure is restored.

The system uses standard automatic transmission fluid.



Constant running piston pump is driven by the engine. The pump takes fluid from the reservoir and delivers it to the accumulator, which stores it under pressure. When the accumulator is charged to full system pressure, the automatic unloading valve returns pump output to the reservoir, and back again to the accumulator when the pressure lowers.

Illustration shows hydraulic fluid reservoir, accumulator, filter and unloading valve arranged for easy servicing.



Both hoist drums have automatic brakes that set whenever pressure is off—whether the engine is not running or fluid pressure drops. Heavy springs set brakes and release by hydraulic cylinders which operate only when full control system pressure is reached. Second cylinder is controlled by operator to apply brakes during normal operations.



Tower Crane Attachment for High Rise Construction

Reach 130 feet up and 120 feet out with the P&H power-jib tower crane attachment. It uses standard boom inserts, except for the cap section. Concrete, forms, materials and tools can be quickly spotted right at the work site. This high profit-making attachment is available for all P&H truck cranes of 50 tons capacity and up.

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Greatest Strength to Weight Ratio

THE P&H ROUND TUBULAR BOOM

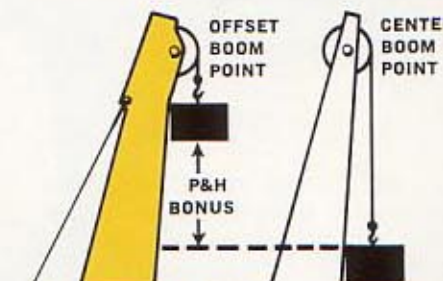
Handles bigger loads higher up...farther out.

This is the way the P&H tubular boom is constructed to lift bigger loads **per foot of boom**—straight up or far out.

The chords are fabricated of drawn seamless 100,000 lb. tensile strength steel tubing, the strongest construction steel available. The round cross section is best suited to resist torsional or bending stresses from any direction.

Very important to the rigidity of the boom is the way P&H ties the chords together with tubular lacings. Each lacing is precisely pre-cut with the ends **contour-fitted** to match the **exact curvature** of the chords to provide maximum bearing surface. Full fillet welds are made completely around and Magna-Fluxed to spot flaws before the boom leaves the factory.

Crimped, one-piece lacings with thin-line welded joints still found on other crane booms, do not pass Harnischfeger standards.

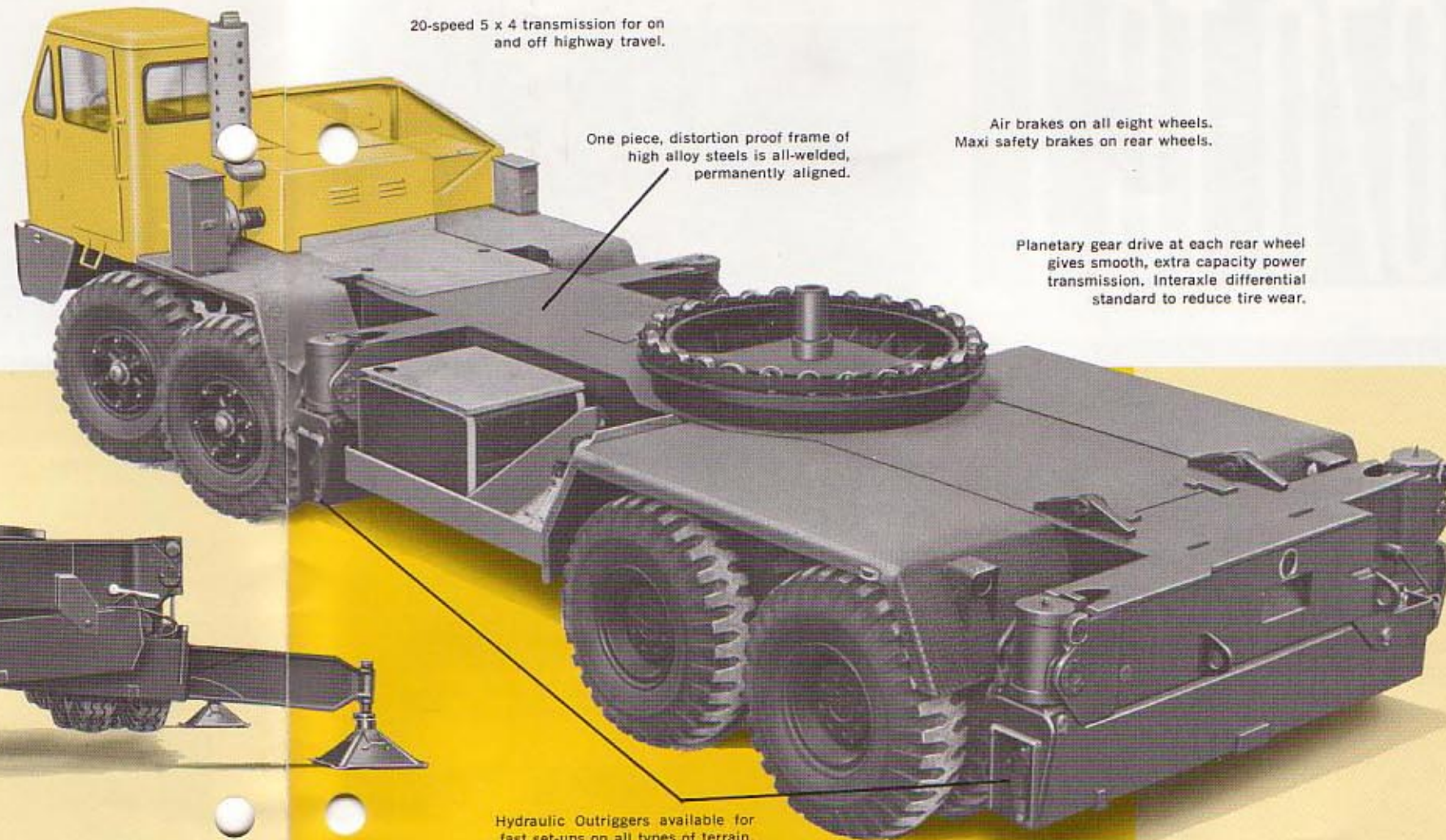


Offset Boom Point — More Lifting Range

The open throat, offset boom point is standard on all P&H truck cranes to allow a greater lifting height when the boom is in a near vertical position. The distance the cable sheaves are offset from the centerline of the boom is multiplied many times in added lifting height. Multiple sheave blocks can be raised higher without fouling.



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20-speed 5 x 4 transmission for on and off highway travel.

One piece, distortion proof frame of high alloy steels is all-welded, permanently aligned.

Air brakes on all eight wheels. Maxi safety brakes on rear wheels.

Planetary gear drive at each rear wheel gives smooth, extra capacity power transmission. Interaxle differential standard to reduce tire wear.



Individually Set Outriggers

All four outriggers are positioned by control switches on either side of the carrier. Entire machine is easily levelled with the help of double gauges.



Wide Range — Double Action HYDRAULIC OUTRIGGERS

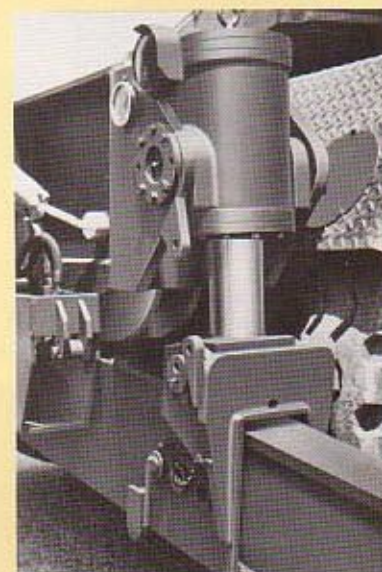
Hydraulic outriggers—the way only P&H builds them—quickly set up the 670-TC carrier into a solid working platform on flat or uneven ground with a minimum of positioning or shoring under floats. Two husky cylinders position each beam where you want it—out and down—to a maximum 20 foot 6 inch spread.

T-1 steel gives the outrigger beams superior strength. Each beam and housing is hinged at the opposite side of the carrier for greatest stability.



Removable Outrigger Frame

A pin-connected rear frame containing the entire outrigger structure is standard where extra weight reduction is required. The frame is quickly and easily handled with the crane hook.



Husky vertical cylinders mounted on carrier frame move beams up and down and provide extra range at the end of the beams. Steel-on-steel cam locks assure double safety and prevent outriggers from backing down. Operator merely flips the lever after outriggers are set.

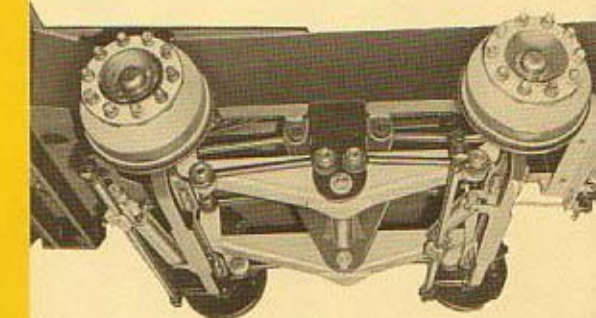
Hydraulic Outriggers available for fast set-ups on all types of terrain.

P&H HEAVY-DUTY CARRIER Solid Support for Big Lifts or Long Booms

The 670-TC Carrier has the strength and ruggedness to provide a firm, stable base for the 70-ton lifts or the 240 foot boom reaches of the matched upper. Yet, its strength is without excessive weight.

From the ground to the boom point, extensive use of the finest construction steel available, with a tensile strength in excess of 100,000 lbs., makes the 670-TC "all working machine." Without dead weight, it is "all traveling machine," too. The 670-TC carrier gets to the job, on or off the highway, maneuvers in close and sets up fast.

There is as much high-performance built into the 670-TC carrier as there is in its superb upper.



Exceptional lifts on rubber and minimal side tipping action are assured with front and rear solid bogie mounting with torque rods. Dual power steering cylinders ease handling and maneuvering.