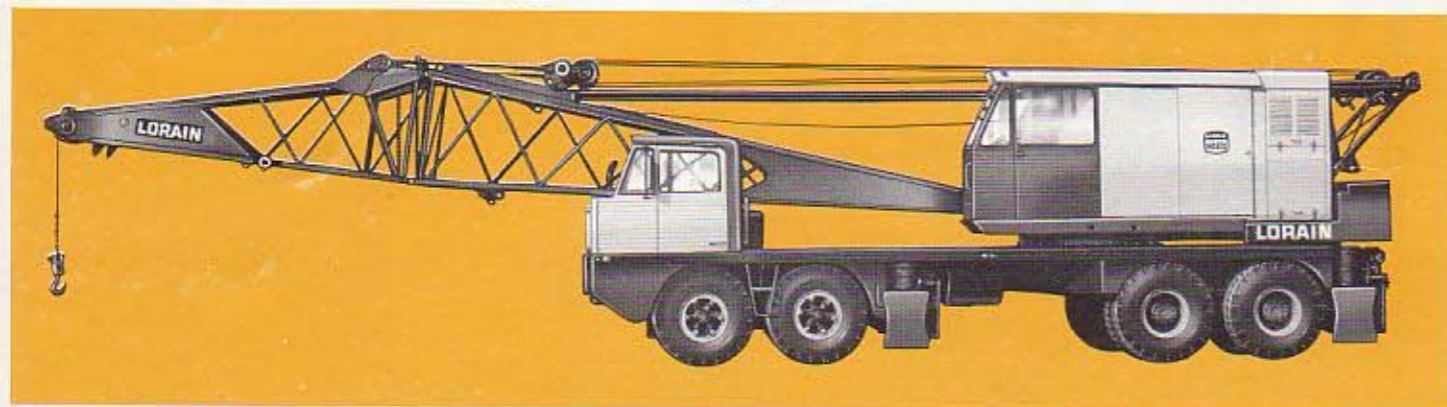


Quick Strip Down for Over-the-Highway Travel

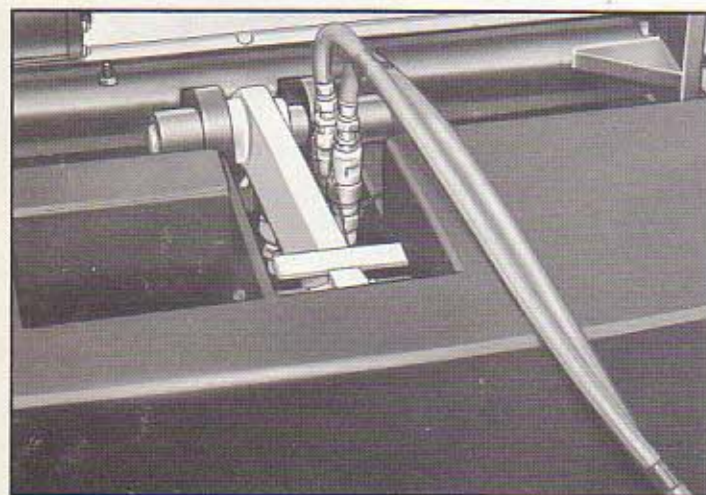


LOWER TRAVEL WEIGHT

The MC-670 is designed with quick-moving contractors in mind. It is a big 70-ton machine, built for the big jobs, but it weighs less than most 65-ton cranes. For even less over-the-road weight further reduction can be made.

REMOVABLE OUTRIGGERS

Outriggers and boxes can be removed. Beams are extended until floats touch ground. Pins are pulled, beams retracted to lower box and beams to ground. Hydraulic lines are removed (quick disconnects). The front unit is skidded out with the hoist line. Carrier is driven away from the rear one.



REMOVABLE COUNTERWEIGHT

After removing one locking pin, the counterweight is easily pushed hydraulically down a wedge ramp onto the carrier deck, free of the turntable for easy transfer to a truck. There are no bolts to remove.



POWER GANTRY

Simple Power Gantry speed moving. Power controls operate the gantry from the operator's position. Raised, it is ready for maximum lifts.

Gantry lowered, gives minimum clearance for road travel. Locking and unlocking is by air. The operator never has to leave his seat.



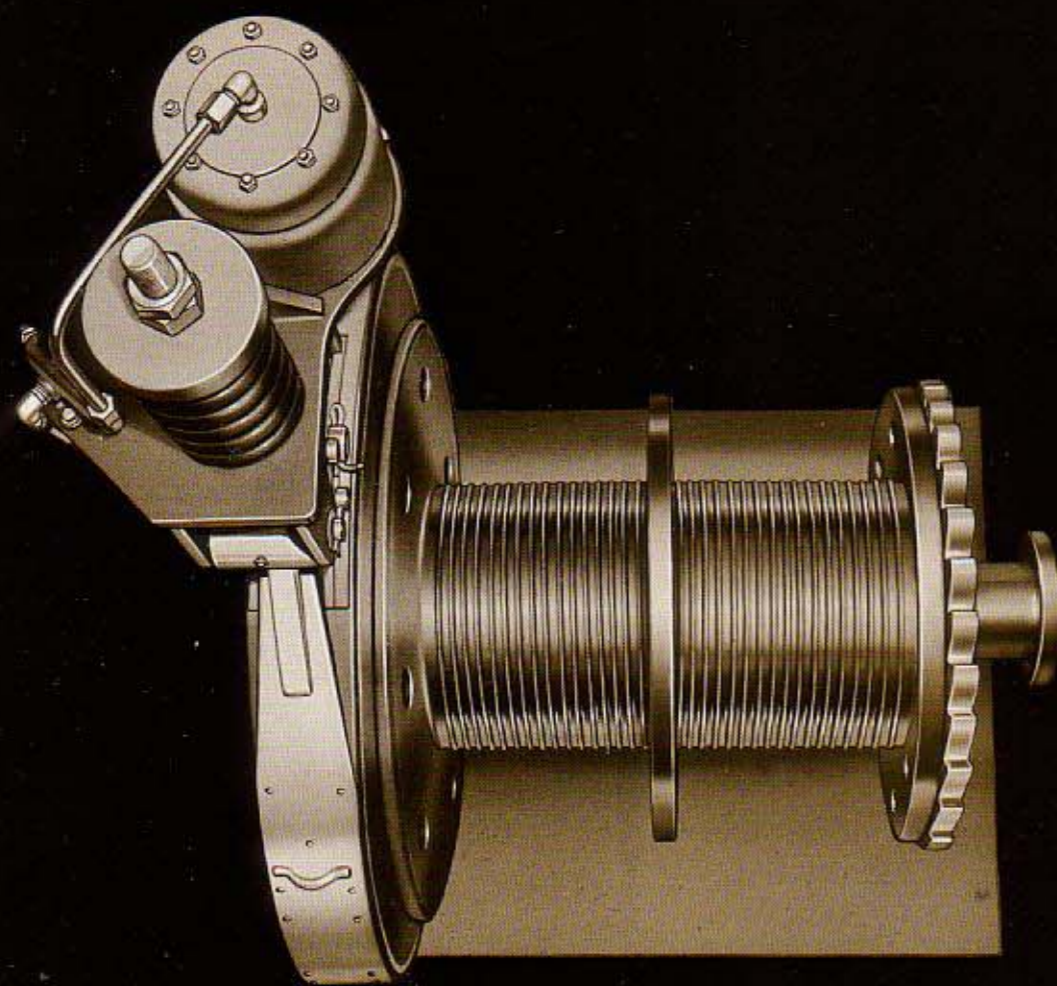
Lorain

Division of Koehring Company
Lorain, Ohio 44055

In accordance with our established policy of constant improvement, we reserve the right to amend these specifications at any time without notice. THE ONLY WARRANTY APPLICABLE IS OUR STANDARD WRITTEN WARRANTY. WE MAKE NO OTHER WARRANTY, EXPRESSED OR IMPLIED, AND PARTICULARLY MAKE NO WARRANTY OF SUITABILITY FOR ANY PARTICULAR PURPOSE.

LORAIN MC-670

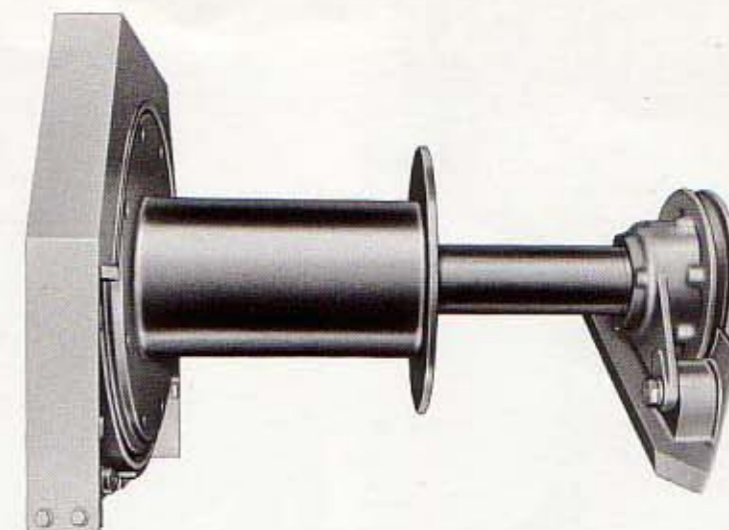




Double Drum Boom Hoist

INCREASES CABLE LIFE

Each end of the boom hoist cable is attached to a separate drum, rotating in unison. This both equalizes the pull on the boom tip and increases cable life. Drums are scored for smooth wrapping. The boom hoist brake is spring-loaded for additional safety. 16-part derricking is standard. Derricking sheaves are on anti-friction bearings for added cable life.



LARGE DIAMETER **Third Drum**

Holds most cable

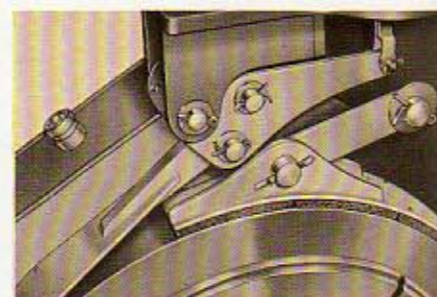
Compare the 10^{5/8}" diameter available third drum with any other. It holds 470 feet of 5/8 in. cable — enough to handle any job you come across. Does not sacrifice power load lowering on either hoist drum or the simultaneous use of hoist, swing and boom hoist.

All-New Clutches



CLUTCHES

Six of the eight big, completely new clutches are independently, metered-air controlled. With interchangeable parts for quick, easy servicing. All are outboard of the side frames for easy accessibility, adjustment. The swing clutch is air-assist manual.



BRAKES more effective

Brakes are of "Total-wrap" design. . . use all the diameter of the brake drums effectively — smooth, positive.

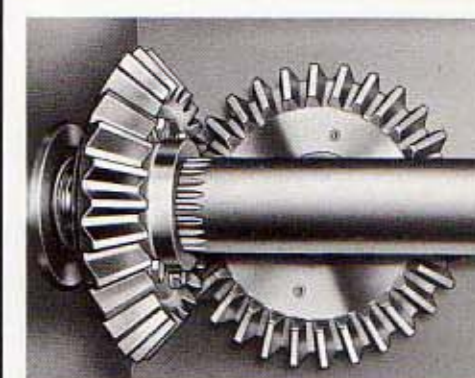


SPRING-LOADED SWING LOCK

Positive, smooth, air-assist swing, combined with spring-set house lock too.

POWER DOWN ON HOIST AND BOOM HOIST FOR GREATER VERSATILITY

Power down is available on both the main hoist and the boom hoist for maximum job versatility. Slow, engine controlled lowering on both drums puts pin point accuracy at the operator's finger tips. Engine reverses drums to drive down load and boom. This, plus the standard torque converter power take off provides the ultimate in load and boom control.

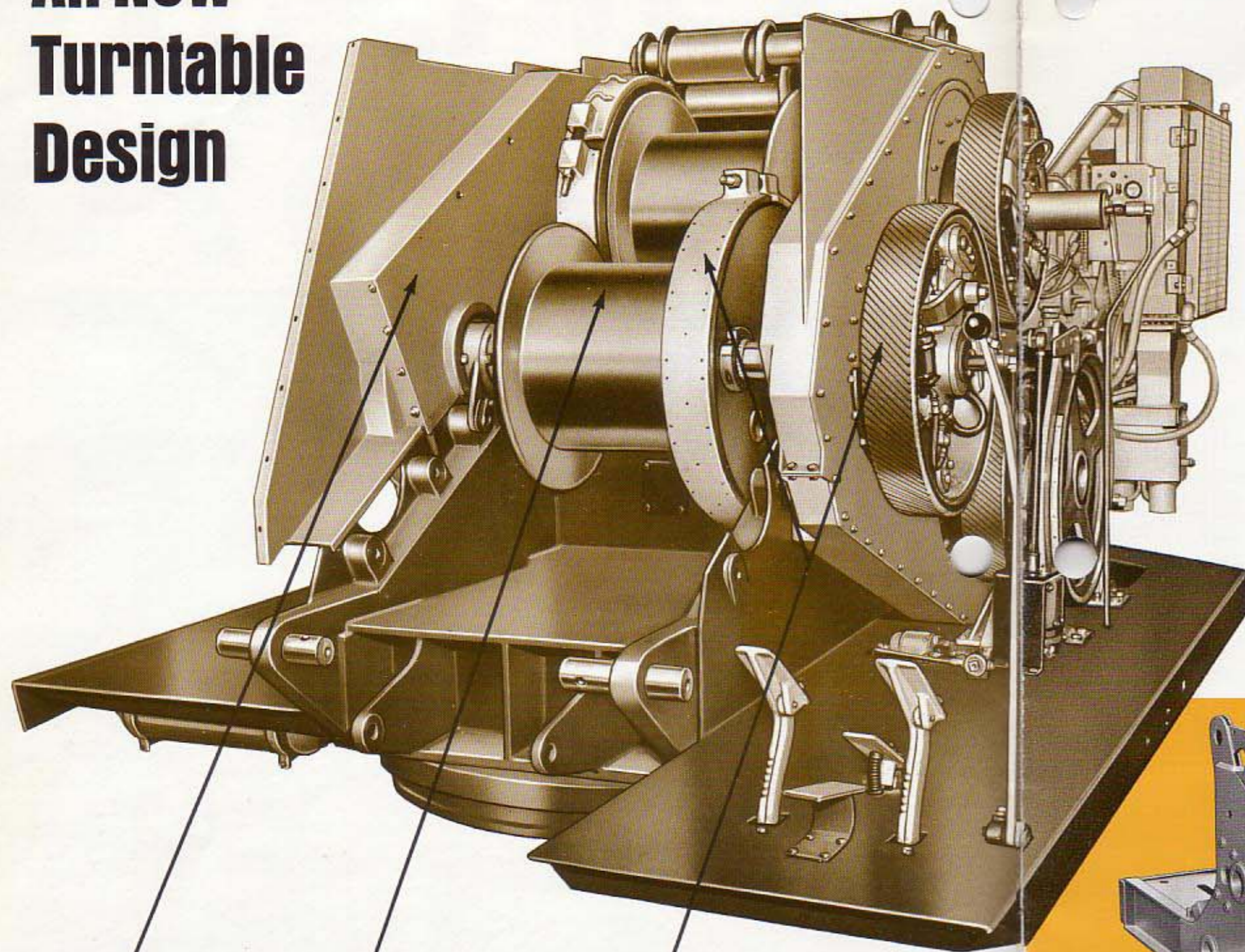


SIMPLE SWING

Only one bevel gear on horizontal swing shaft. Simple, less wear.

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hydro-cranes

All New Turntable Design



Involute splined, alloy steel shafts are gear driven, with induction hardened gears and related anti-friction bearings pressure lubricated in sealed cases. No chain problems. Minimum lubrication.

The "waterfall" design of the MC-670 turntable permits large diameter, wide hoist drums mounted in tandem to provide outstanding cable capacity. A high speed hoist is available that consists of a planetary overdrive to increase speed of rear drum to 400 ft. per minute.

Clutches and brakes are separated on shaft for maximum cooling effect. Drums are designed to create an effect to dissipate heat still further.

A retarder for the output shaft of the torque converter gives additional precise control of all functions through slower machinery overhaul.

Here is what the MC-670 can give you that no other crane can:

The Lorain MC-670 Moto-Crane is the third in a family of cranes of completely new concept in crane design that has been job-tested for almost 2 years. It is like no other design and gives the contractor seven specific advantages; all in one package; with no compromises. For its rating, here are the advantages it has:

- 1 The longest boom
- 2 The greatest lifting capacities
- 3 The greatest cable capacity
- 4 The lowest weight. Lighter than many 65-ton cranes.
- 5 The greatest dependability
- 6 The simplest maintenance
- 7 More capacity per pound and per dollar.



One-piece Turntable Frame for greatest strength

Side frames and turntable bed are a welded, one-piece structure—line bored. This provides maximum strength, rigidity, light weight, positive shaft alignment.

Cab and Controls



EASY, PRECISE AIR CONTROLS

Metered-air control of all friction clutches, except swing, gives smooth, precise, operation of each function separately. Each operation can be independent or two or more can be blended together for the best possible cycle control. Available drum rotation indicator adds further convenience.



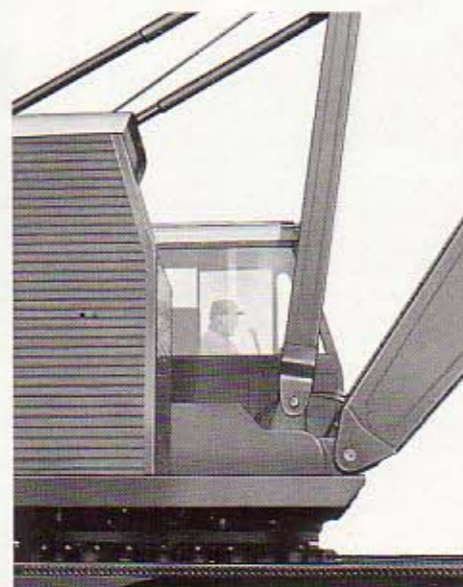
ROOMY COMFORT FOR OPERATOR

The operator's position and relationship to the controls of the MC-670 has been "human engineered" for maximum comfort and ease of control. A roomy cab with matched side mounted levers and more knee room puts the operator always in command for efficient operation.



SEPARATE OPERATOR'S COMPARTMENT

A folding door separates the operator's compartment from the rest of the turntable yet permits easy access for adjustment and servicing. Quieter, safer. Another operator's "plus" with an MC-670.



"UP FRONT" VISIBILITY

The operator is up front where the work is. Picture window visibility contributes to a safer, more efficient operation. Note how the operator sits well forward for visibility to both sides.

There are no blind spots on either side. Even on the off side the operator can see well back of his position for safer, more efficient operation.

Shear-Ball[®] Turntable Connection



Field Proven Since 1950

The "Shear-Ball" connection is of exclusive Lorain design. Like a huge ball bearing it allows the turntable to revolve smoothly and accurately. One race is attached to the carrier... the other to the turntable... with balls interlocking the two races and anchoring the turntable to the mounting. All load-forces are distributed at a given time as compression loads over at least 40% of the balls instead of being concentrated on a few highly stressed rollers. Thus, "Shear-Ball" design provides much greater load carrying capacity than roller designs... thus less wear, easier, smoother swings... safer.

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Warranted in Writing for 10 Years

1. Faster Work Cycles

Concentric elastic spacers prevent the balls from ganging up. There is no binding... no rollers to skid or indent, thus resist rotation. Less "Pendulum" action from the load.

2. Long Service Life, Greater Strength

A full-circle of hardened high-alloy steel balls, is precisely mated to two precision ground races of forged, alloy steel rings with file-hard, inner surfaces. Resist indenting, wearing or breaking.

3. No Unprofitable Downtime for Adjustments

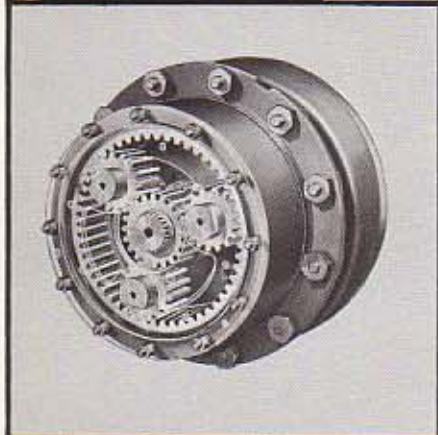
There is no center pin, nut... centering gudgeon... bushings... or any type of exposed roller or roller path... with their continuous adjustments. Wear is so negligible that no provision is made for adjustment.

4. Minimum Maintenance

"Floating" seals adjust themselves to both races. Lubrication lasts three to six times longer than ordinary roller lubrication.

SPRING-ACTUATED BRAKES

Spring-actuated brakes on four rear wheels give maximum safety. For normal service these act as conventional air brakes. However, if there is a loss of air they are applied automatically. They are also used as parking brakes.



GREATER TRACTIVE EFFORT

Double reduction drive with final reduction through planetary hubs, with high traction differential and inter-axle differential with lockout, are mounted on rubber-mounted equalizer beams and torque rods. This puts the driving torque on the ground where the work is. All this, plus generous ground clearance, makes soft ground or rough ground travel a breeze with an MC-670.



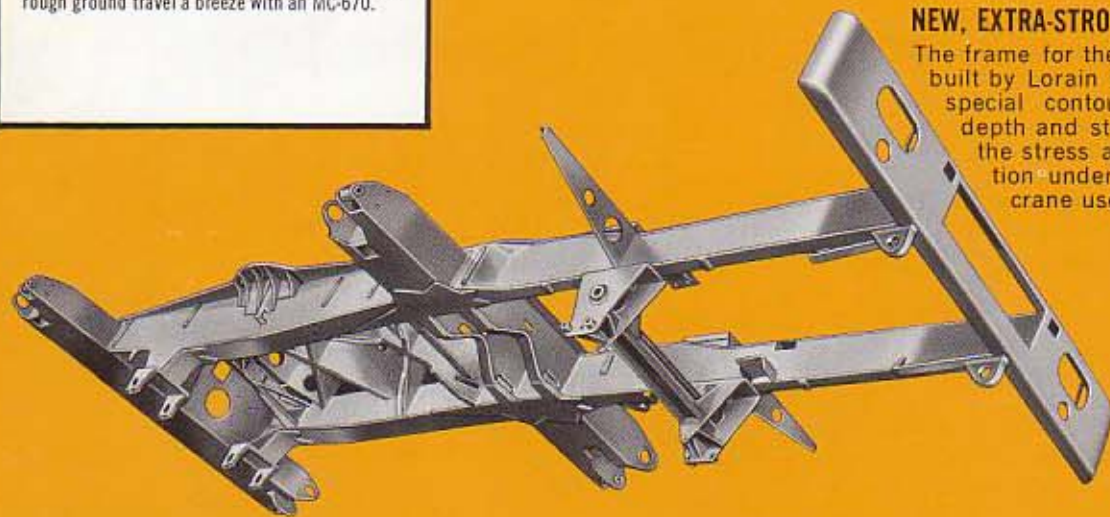
NEW CARRIER DESIGN

This underneath view of the MC-670 carrier shows the specialized design and rugged construction built in by Lorain. It is a new design, matched in every way to the newly designed turntable.

NEW, EXTRA-STRONG FRAME

The frame for the Lorain MC-670 is designed and built by Lorain especially for this model. It is of special contoured box section with greatest depth and strength where needed to provide the stress and torsion resistance for operation under the live loadings of heavy duty crane use.

100,000 lb. yield alloy steel is used, which is approximately double that of the average frame material.



Lighter-Stronger LORAIN Carrier for Maximum Roadability

Lorain put the first crane on rubber tires in 1919. This latest Lorain Moto-Crane is a far cry from the first on mounted on a chain driven truck chassis.

Lorain has designed and built its own carriers since 1939. This one in particular is a breakthrough in crane carrier design as it maintains the ruggedness needed for demanding, big crane operation yet enables the MC-670 to be lighter than most 65-ton machines.

The MC-670 gives you big crane profitability with small crane mobility. That's extra value. Lorain builds it that way.

There is excellent visibility from the carrier cab and the new comfort-contoured seat makes highway travel a breeze.

Completely covered top deck and fenders are cleaner, safer.



Lorain-designed hydraulic-assist steering gives positive, easy control.

Higher horsepower and high altitude engines available.

20 speeds forward, 4 reverse give maximum flexibility for on-the-road or on-the-job travel.

LORAIN

Power-Set® Outriggers are faster, safer, simpler

Only Lorain has patented Power-Set Outriggers... that are faster, simpler, safer, with half the parts, and — most important — at less cost to buy, operate and maintain. These are standard on the MC-670.

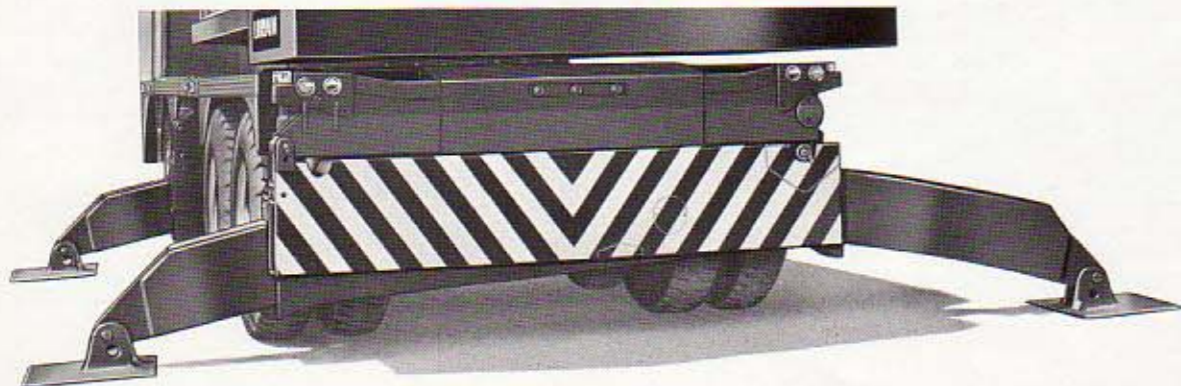
A built-in automatic wedge lock holds the beam securely under load, completely independent of hydraulics. No relying on hoses, connections, or check valves. No manual locks of variable efficiency. No separate floats to manhandle. Floats are fastened safely to beams, and are self-adjusting, to con-

form to uneven ground. Floats fold flat against carrier when retracted. Easy to level... eliminates uphill swing... minimizes dangerous boom side loadings.

Contrast with other non-attached types where angular approach of jack or cylinder to float can be dangerous. Too, rugged curved beams provide maximum strength and a proper balance of simple, timesaving out-and-down travel in one motion.



Verti-Power Set Outriggers now available, too



The new Verti-Power Set Outriggers, that are available as an alternate, retain all of the proven advantages of the time-tested Power-Set Outriggers plus added vertical motion for even greater on-the-job versatility.

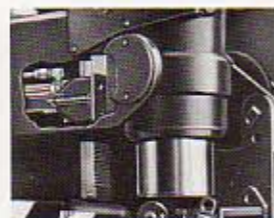
Each pivoted box with beam can move vertically to the ground at an infinite number of positions from close-in to fully-extended positions. This eliminates cribbing or gives ease of leveling when the outriggers are at full 21' spread. An automatic mechanical lock safely eliminates reliance on hydraulics.

Now, where obstructions prohibit the full extension of beams, the vertical cylinder can move directly downward to touch the floats to the ground or to level the machine. Everything is done from the operator's cab.

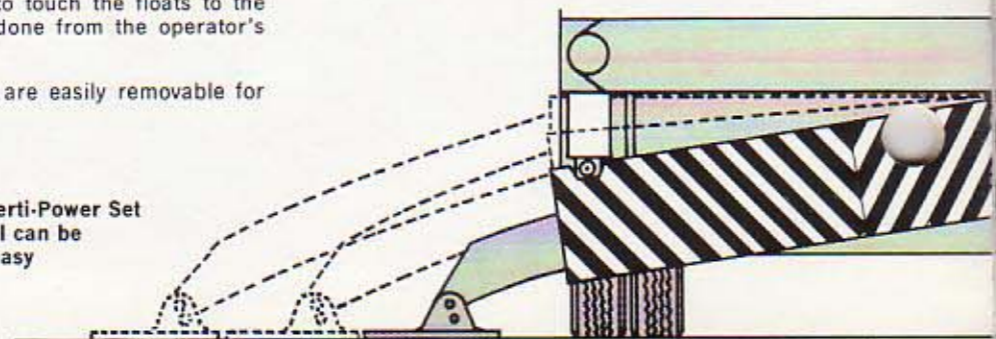
Of course, Verti-Power Set Outriggers also are easily removable for minimum highway weight.

Vertical cylinder pushes each pivoted box and beam down for choice of an infinite number of positions out to full extension. Ratchet lock takes hold automatically. Is released by air power.

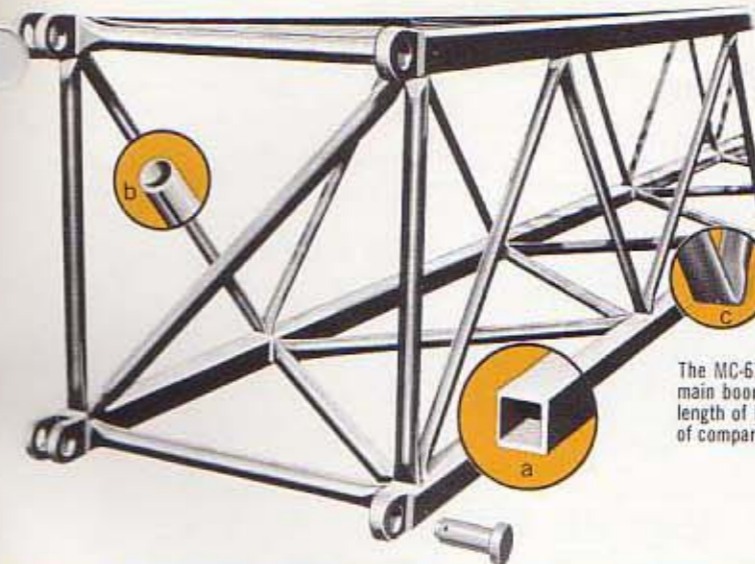
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hydro-crane



At full 21 ft. extension MC-670 Verti-Power Set Outriggers with attached floats still can be moved vertically 10½ inches for easy leveling of machine.



The Big MC-670 Boom



The MC-670 can use 180 feet of main boom. This is the greatest length of boom on any machine of comparable rating.

SQUARE-TUBULAR-CHORD DESIGN MAKES LORAIN BOOM THE BEST IN THE WORLD

Foot for foot, pound for pound it is the strongest boom ever built. Four main chords of unique, square-tubular cross section (a) are formed of high-strength aircraft type alloy steel with a yield strength of 140,000 psi. The hermetically sealed square-tube design, plus extra large cross section, gives the maximum possible rigidity per unit of weight, assuring greater payloads and long service life. Continuous, sealed round-tube lacing (b) is specially welded into a precise, flat "maximum-contact" joint (c) at common points on the smooth inner faces of the main chord to provide a torsional resistance usually obtainable only by heavy banding. All sections are pin-connected for fast rigging.

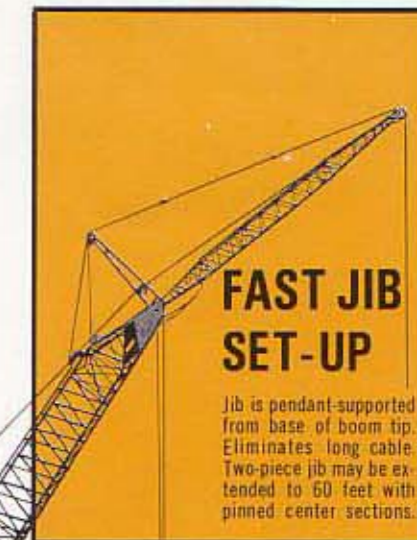


Swaged pendants speed up boom length changes. They are extra light, extra strong too.

Easy, self-aligning pin-up of floating harness to base section for quick boom changing. Power-assist cylinder available for positioning harness on boom length changes.



Bolt-on roller rope guards are available for offset and long-tapered boom peaks for use in bucket work.



FAST JIB SET-UP

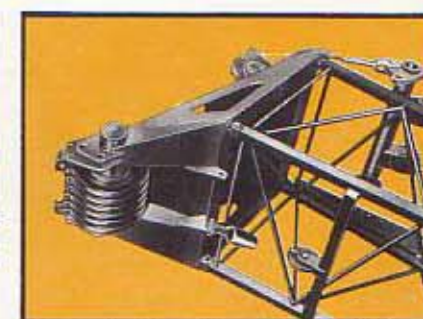
Jib is pendant-supported from base of boom tip. Eliminates long cable. Two-piece jib may be extended to 60 feet with pinned center sections.



Offset, open throat boom tip is standard for maximum clearance above load. Minimizes load-and-boom interference at close radii. Five boom head sheaves are standard. One more is available. Rope guards are standard.



Long-tapered boom tip is available for maximum reach and capacities. Five boom head sheaves are standard. Additional sheave available.



A 3-foot hammerhead boom tip is available. It is easily pinned to the base section or any center section. 5 sheaves are standard. 6 are available.