

Link-Belt®*Eighty Series***HSP-8018XL****Hydraulic Rough-Terrain Crane**

18-ton (16.33 metric ton)



FMC



FMC Link-Belt



Step up into the cab of the *Eightys*

This is where design and performance come together.

Sturdy, conveniently placed grab rails and steps, sliding door, and tilt steering wheel provide access to the cab... with the upper in any position.

Engineered for maximum convenience and comfort, a four-way tilt steering wheel allows the operator to easily adjust the wheel for pick and carry or over-the-road travel. The wheel is thick rubber padded and locks with the column mounted ignition key.

A six-way adjustable seat assures operator comfort, and the convenient placement of gauges and controls adds to ease of operation.



For operator convenience, the optional boom length indicator is mounted in complete view and has a digital read-out of boom length for precise, accurate control.

All instruments are in the cab, including engine gauges, for full system readings... at a glance. Gauges and controls are all positioned from an operator's point of view and are captioned with international symbols. Boom angle indicator operates on a graduated scale for accuracy and is located in complete view of the operator.

Swing up roof window, sliding rear window, and tinted safety glass all around provides excellent ventilation and visibility. The sloped front of the

carrier gives the operator unequalled visibility for critical maneuvering in pick and carry operations.

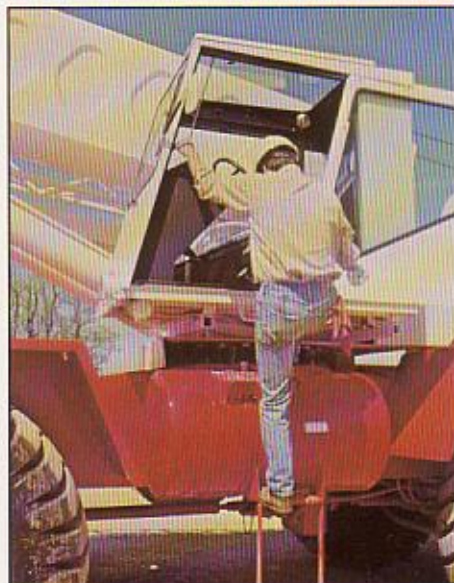
To reduce in-cab noise and vibration, the cab is mounted on rubber isolation pads and is available with acoustically lined insulation.

Lights are just where they should be, on the upper so lighting follows the load during swing.

The cab of the Eighty's... a comfortable control center for rugged performance.



Sturdy grab rails and conveniently placed steps provide plenty of access to the cab of the Eighty's, with the upper in any position.



The cab of the Eighty's features a tilt steering wheel that tilts to four positions. All gauges are located in-cab on the slanted dash, captioned with international symbols.

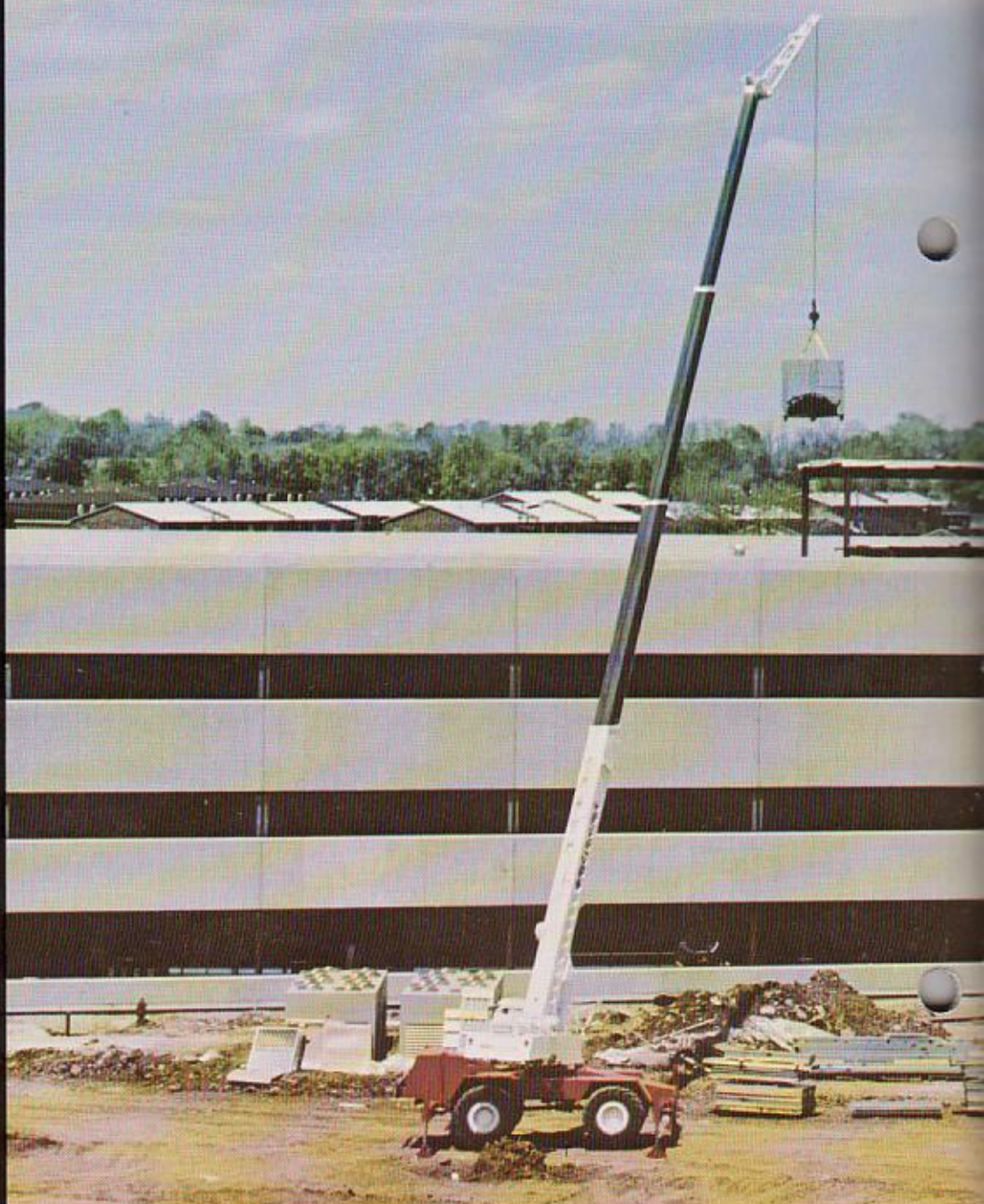
Eighty Series

Link-Belt® hydraulic rough terrain cranes

Step up to the top of the 15 to 22 ton (13.61-20 mt) class with the 122' (37.19 m) tip height of the Eighty Series HSP-8015, 8018, 8020, and 8022. This tip height is achieved with the optional 91' (27.74 m) four-section boom* and 24' (7.32 m) lattice fly. Also available for the Eighty's is a 14'6" (4.42 m) A-frame jib which can be offset 10, 20, or 30 degrees.

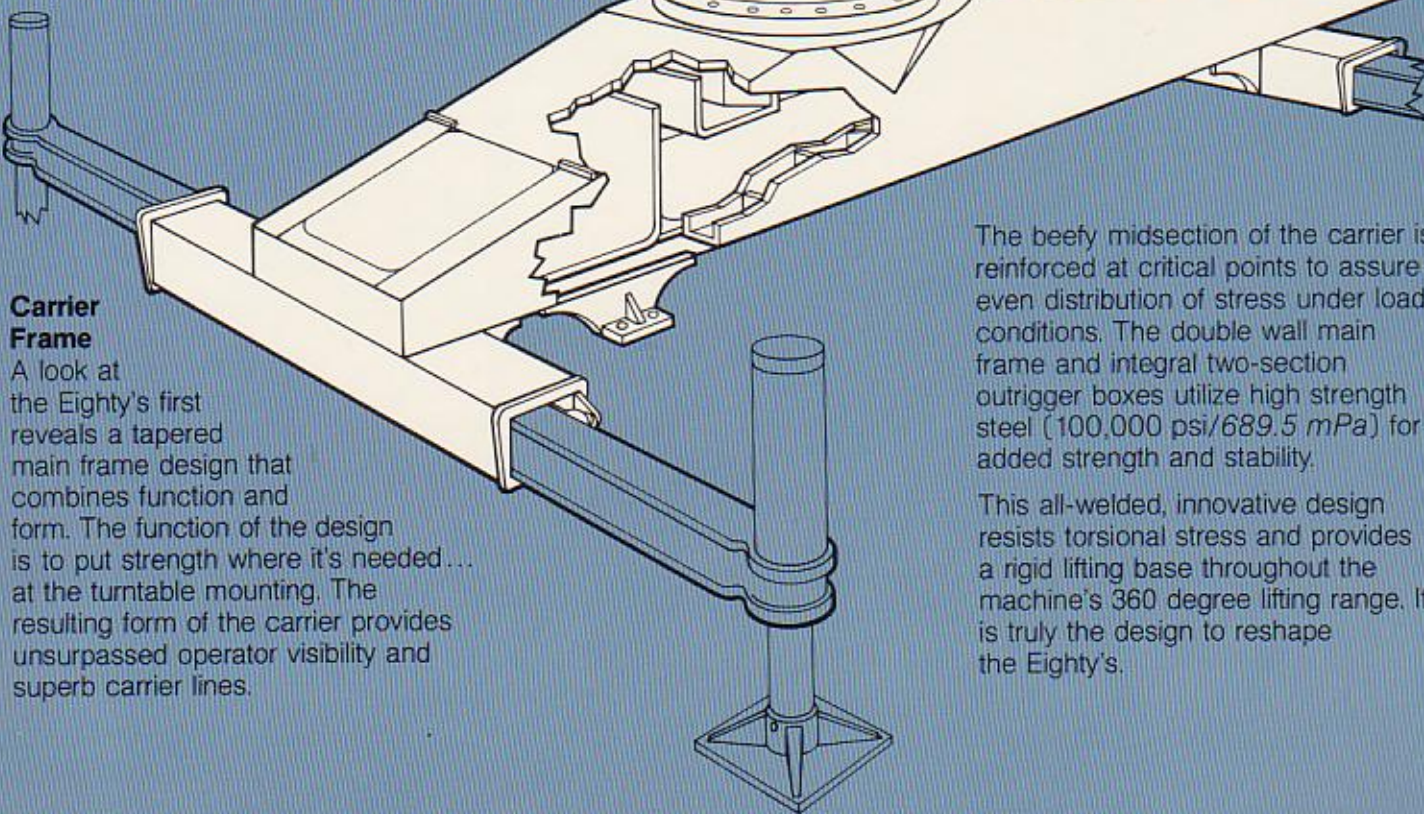
The 176' (53.64 m) tip height of the HSP-8040 tops the 40-ton (36.29 mt) class with the 110' (33.53 m) four-section boom, 33' (10.06 m) lattice fly and 25' (7.62 m) A-frame jib. The jib achieves offsets of 5, 17.5, and 30 degrees.

*Standard on HSP-8022.



The design to reshape the *Eightys*

The FMC Link-Belt® Eighty Series... a new design in hydraulic rough terrain cranes that puts the emphasis on performance.



Carrier Frame

A look at the Eighty's first reveals a tapered main frame design that combines function and form. The function of the design is to put strength where it's needed... at the turntable mounting. The resulting form of the carrier provides unsurpassed operator visibility and superb carrier lines.

The beefy midsection of the carrier is reinforced at critical points to assure even distribution of stress under load conditions. The double wall main frame and integral two-section outrigger boxes utilize high strength steel (100,000 psi/689.5 mPa) for added strength and stability.

This all-welded, innovative design resists torsional stress and provides a rigid lifting base throughout the machine's 360 degree lifting range. It is truly the design to reshape the Eighty's.

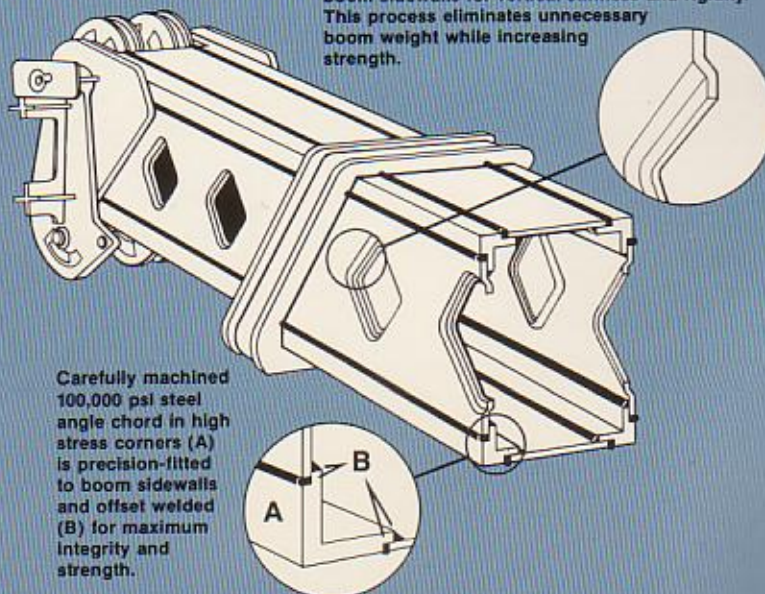
The Boom

The exclusive design of the FMC Link-Belt hydraulic boom is the result of many years of Link-Belt cable crane experience. FMC engineers applied job-proven experience and lattice boom technology to design a high performance hydraulic boom.

The result is an unequalled, innovative design that yields a maximum strength to weight relationship without add-on stiffeners.

The FMC hydraulic crane boom design minimizes vertical and horizontal deflection for precise load control, and allows optimum capacities throughout the working ranges.

Diamond-shaped impressions are embossed into boom sidewalls for vertical stiffness and rigidity. This process eliminates unnecessary boom weight while increasing strength.



Carefully machined 100,000 psi steel angle chord in high stress corners (A) is precision-fitted to boom sidewalls and offset welded (B) for maximum integrity and strength.

On the jobs of the *Eightys*

The HSP-8015, 8018, 8020, and 8022 (15-22 ton 13.61-20 metric ton) hydraulic rough terrain cranes are built for performance.

The 25' to 60' (7.62 m-18.29 m) three-section, full power boom can be fitted with a 20' (6.10 m) swing-away fly for a maximum tip height of 88' (26.82 m).

An optional 28'9" to 91' (8.76-27.74 m) four-section boom can be equipped with a 24' (7.32 m) lattice fly for a maximum tip height of 122' (37.19 m). Also available is a 14'6" (4.42 m) A-frame jib which can be offset 10, 20, or 30 degrees.



Both the standard three-section boom and optional four-section boom achieve a maximum boom angle of 80 degrees. When the machine is shut down or at low engine speeds, integral holding valves on both tip and center boom telescoping cylinders prevent boom sections from creeping in.

Hoist System

The hoist system of the Eighty's offers a line speed/pull combination that is the best in their class. Main and auxiliary winches are of equal size for matched line speeds and pulls. Both use 9/16-inch (14 mm) wire rope and achieve maximum permissible line pulls of 9,000 pounds (4 082 kg). This enables the HSP-8015 and 8018 to achieve maximum capacities with only four parts of line for faster speeds and less set-up time.

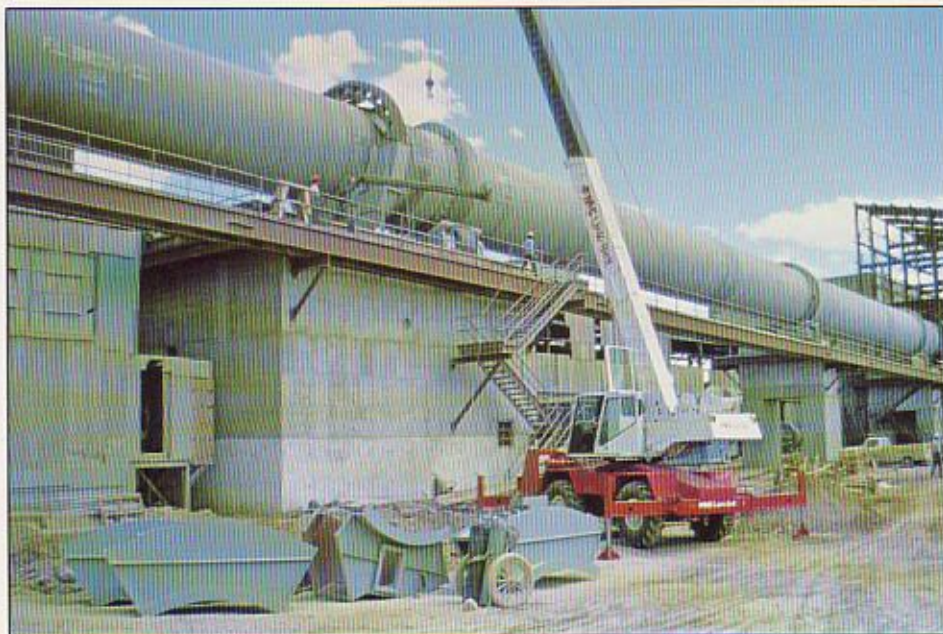
Equip the Eighty's main winch with the two-speed hoist system and generate line speeds up to 416 fpm (126.80 mpm) with the 12" (.30 m) smooth drum, or 443 fpm (135.03 m/m) with the 13 1/4" (.34 m) grooved drum. Exclusive 5 degree sloped flanges on winch laggings assure smooth, even wrapping.

Load hoisting system is power up, power down with integral automatic brake to eliminate load drifting.

In any crane application, engine rpm's drop off when a pick is made. The Eighty's feature a variable speed



governor which automatically compensates for this stress and brings engine speeds back up to precise operating levels.



Maneuverability

The Eighty's offer three modes of steering: coordinated four-wheel, four-wheel crab, and two-wheel. All steering modes are controlled from the exclusive tilt steering wheel. This gives the operator greater control and frees one hand to maneuver the load while in pick and carry operations.

The 16' (4.88 m) turning radius of the Eighty's is the tightest in the 15 to 22 ton class. Add to this a 45,460 pound (20 621 kg) maximum tractive effort and gradeability of 74% at 1 mph (1.6 km/h), and the Eighty's add up to outstanding, mobile rough terrain vehicles.

Balanced axle loadings and the exclusive, fully automatic transmission of the Eighty's assure smooth travel.

The Eighty's have a four-speed, fully automatic transmission with two-



speed transfer case for a total of eight speeds forward and two reverse. Select the low transmission range and get just the right travel speeds for pick and carry functions. On the road, slip the transmission into high range, lock in two-wheel drive, and achieve travel speeds up to 23 mph (37.01 km/h). All transmission shifts occur automatically for smooth power transfer.

An oscillating rear suspension provides maximum four-wheel traction on rough terrain. For stability in over-the-side, on-rubber lifts, the rear axle lockout is automatically activated when the boom swings 2.5 degrees off centerline.

The Eighty's are equipped with air over hydraulic four-wheel service brakes and drum-type parking brake.

Swing System

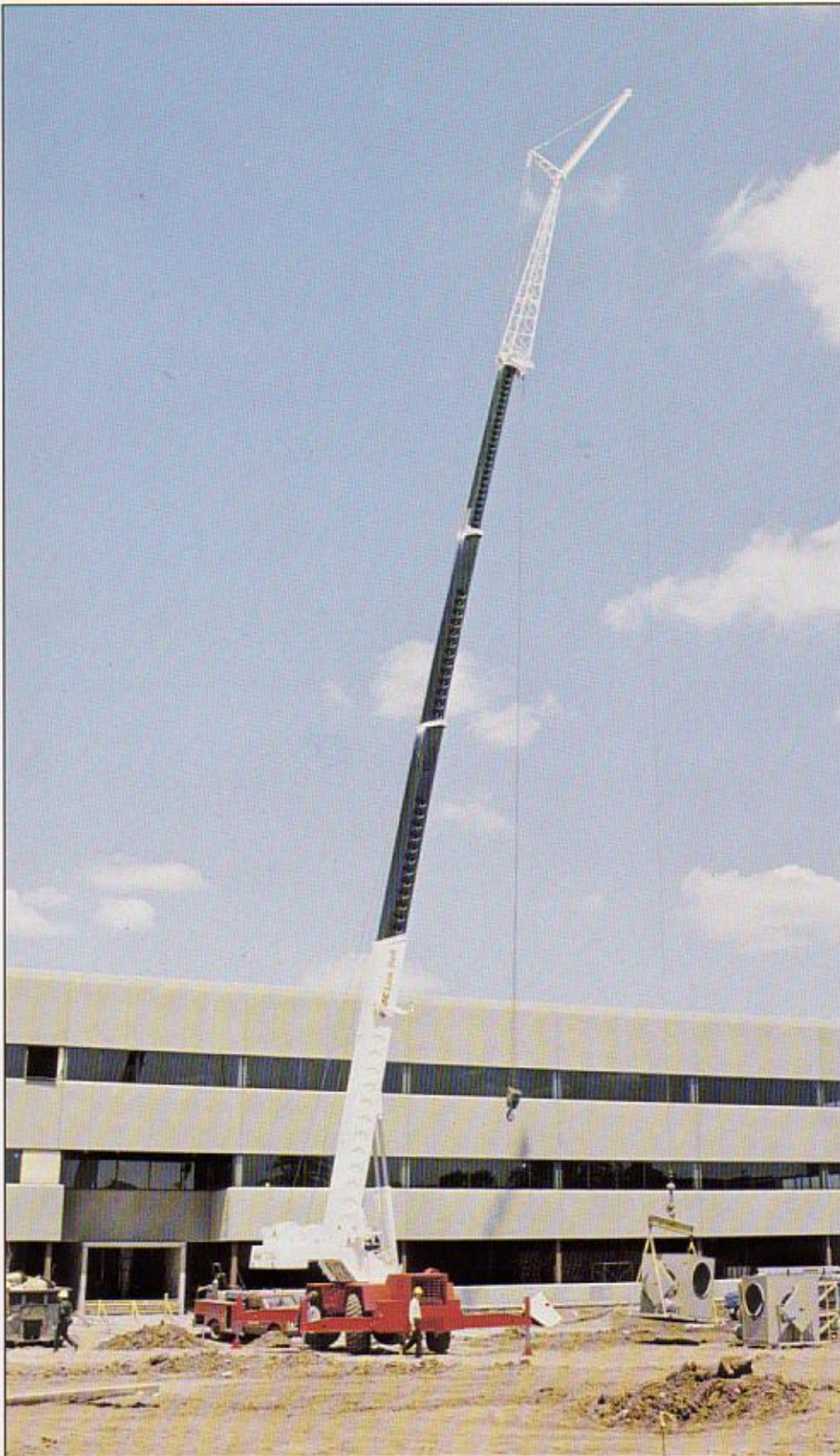
Smooth, precise swing and accurate speed control is easily achieved with the free swing system of the Eighty's. The system provides smooth acceleration and deceleration, and permits centering of the boom over load before lifting. The system includes a bi-directional swing motor, single-stage planetary reducer, and spring applied/air released brake. A two-position (front and rear) mechanically operated lock is standard with a 360 degree house lock available.

Outriggers are beam and jack type that extend to 17' (5.18 m), providing a nearly square lifting base for maximum stability. All jack cylinders are equipped with an integral holding valve.

Take a good look at the Eighty's. They're the performers for years to come.



The top of the 40-ton class.



At the very top of this class is the 176' (53.64 m) tip height of the Eighty Series HSP-8040 40-ton (36.29 metric ton) hydraulic rough terrain crane.

This tip height is achieved with the standard four-section boom which telescopes from 35' to 110' (10.67-33.53 m) and the optional 33' (10.06 m) fly with 25' (7.62 m) A-frame jib.

The standard four-section boom includes a base, two power sections, and manual section. The optional fly is a one-piece lattice which is completely stowable. The A-frame jib is also stowable and can be offset 5, 17.5, or 30 degrees.

Standard head machinery for the HSP-8040 has four sheaves with an optional fifth for a maximum of ten parts of line. The boom head can also be equipped with the available auxiliary lifting sheave for increased versatility and less set-up time, as auxiliary sheave does not have to be removed when fly is in the working mode.

A maximum boom angle of 80 degrees can be achieved and boom lowers to minus one degree for a superior working range.

Consistent with other models in the Eighty Series, the HSP-8040 tip and center boom telescoping cylinders are equipped with integral holding valves to prevent boom sections from creeping in.

Hoist System

Standard power up/power down hoisting for the HSP-8040 is achieved with a main winch with two-speed motor and automatic brake to eliminate load drifting. The main and optional two-speed auxiliary winches are of equal size for matched line speeds and pulls.



Standard with the HSP-8040 is a 17" (0.43 m) grooved drum with a 17" smooth drum optional. Both generate a maximum permissible speed of 548 fpm (167.03 m/m) and pulls up to 12,720 lbs. (5 770 kg) All winch drums have 5 degree sloped flanges for smooth, even wrapping of the 3/4" (19 mm) wire rope.

Also available on the HSP-8040 is the exclusive FMC true gravity free fall option. The main winch can be equipped with the free fall option for added versatility of application such as clamshell excavation, electric magnet handling of scrap, and air hammer operations. These applications are achieved with precision and minimum cycle times ... all without expensive machine options.

The HSP-8040 is standard with a variable speed governor which automatically compensates for engine stresses created when picks are made. This results in most efficient use of engine and increased engine life.

Stability

Outriggers are beam and jack type that extend to 22' (6.71 m) and retract to 9'9" (2.97 m). Outrigger controls and sight level bubble are located in the cab for quick and precise set-up. All jack cylinders are equipped with an integral holding valve.

The swing system implements a bi-directional hydraulic swing motor and planetary reducer for smooth, 360 degree swing. The swing brake is manually applied/released disc brake mounted on the speed reducer.

Standard is a 360 degree house lock operated from the cab for precise, stable over-the-side placement of loads.

For additional stability in over-the-side, on-rubber lifts, the rear axle lockout is automatically activated when the boom swings 2.5 degrees off centerline.

Maneuverability

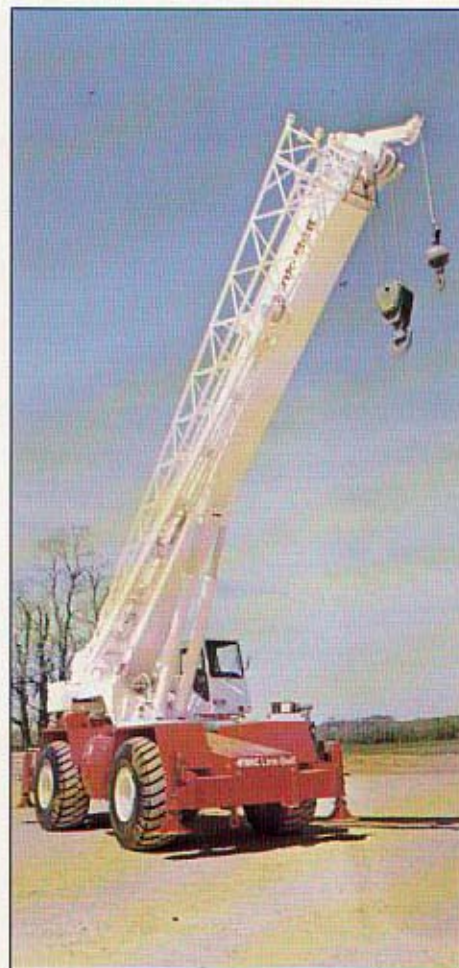
Like the other models in the Eighty Series, the HSP-8040 offers three modes of steering (coordinated four-wheel, four-wheel crab, and two-

wheel) all of which are controlled from the exclusive tilt steering wheel.

On the job, the HSP-8040's oscillating rear suspension gives maximum four-wheel traction with maximum tractive effort of 48,030 pounds (21 786 kg) and gradeability of 110% at stall. On the road, the HSP-8040 achieves travel speeds up to 21 mph (33.79 km/h).

The HSP-8040 has six speeds forward and six reverse. Brakes are four-wheel air over hydraulic with a spring applied, hydraulic released parking/emergency brake.

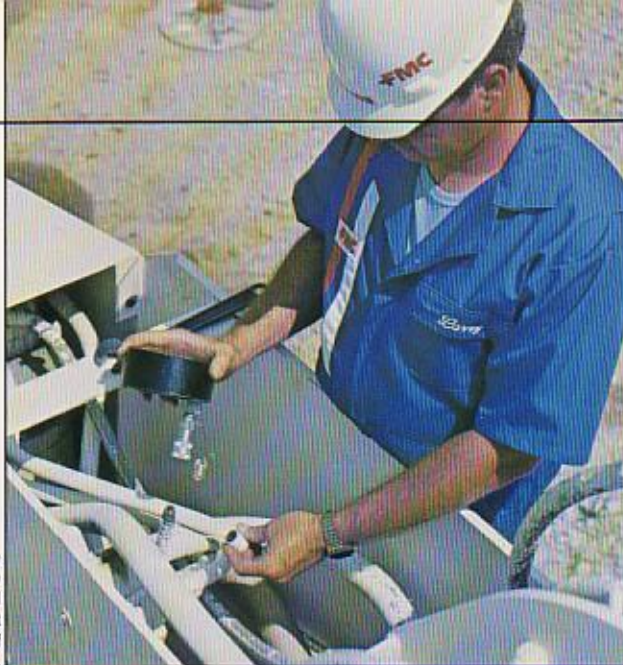
The HSP-8040 ... it's stepping up the Eighty Series to the top of the 40-ton class.



Serviceability for the *Eightys*

The simplified design of the Eighty Series results in easy access for quick service and maintenance. Take a walk around the Eighty's and see the built in accessibility and ease of service.

Control valves are accessible from the service platform. All have quick disconnect fittings for ease of pressure testing.



The cover of the simplified collector ring is easily removed for quick accessibility with the boom at any angle.



Accessibility for maintenance of swing motor is through access holes in the removable cover.



Engine access for the Eighty's is through a top hatch and two side doors.

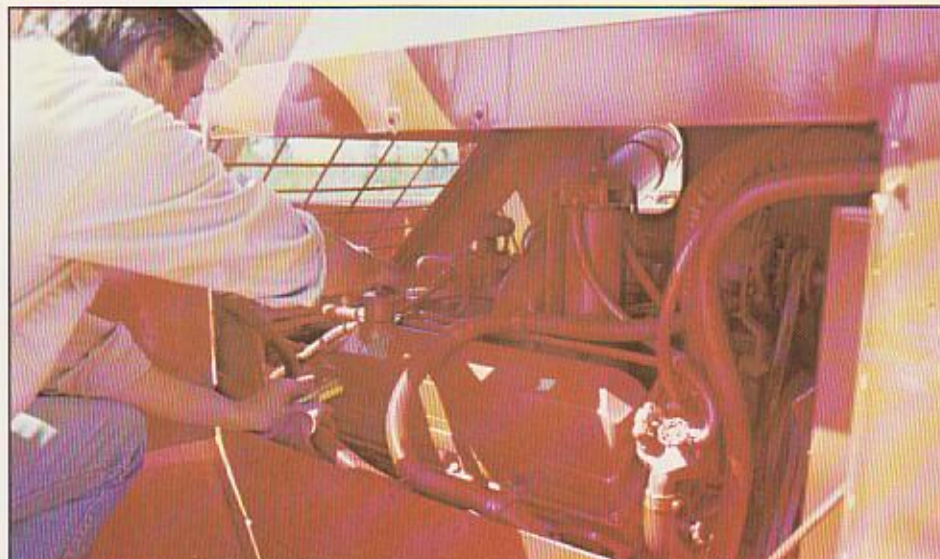
Maximum filtration of the hydraulic system is assured by monitoring visual indicators on filters.



Six dash-mounted and two carrier-mounted circuit breakers protect the electrical system.



The sloped-deck carrier design provides complete service access to the upper as well as carrier-mounted components.





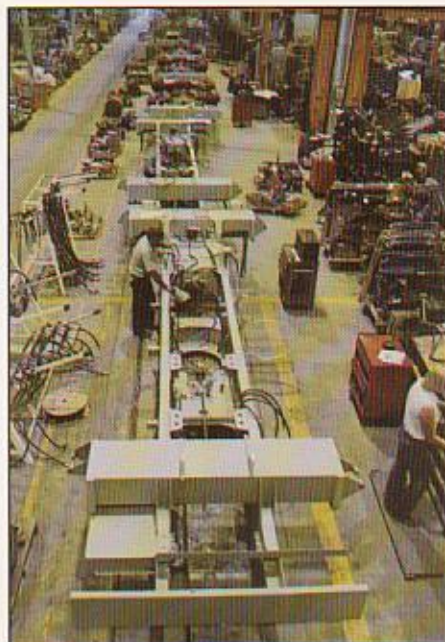
Built-in reliability . . .

The FMC Hydraulic Crane Division, in Lexington, Kentucky, is a modern facility designed specifically for the manufacture of hydraulic cranes. At this location, state-of-the-art machine tools and innovative assembly procedures are implemented by trained technicians to produce the Eighty Series.

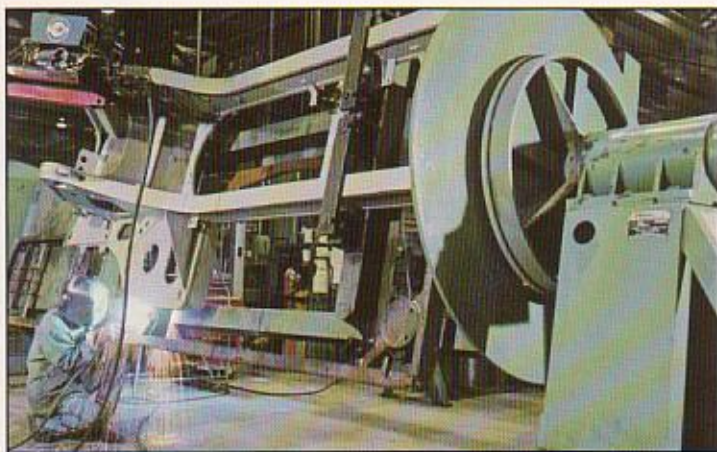
All components are quality inspected and individually primed prior to assembly. Once the machine is assembled, it is steamed cleaned and reprimed before being sent to final paint. After all phases of production are completed, each unit undergoes a customer oriented Quality Assurance Audit prior to shipment.

Reliability. It's built into the Eighty's to keep them performing on the job.

Precision testing equipment, accurate to within .001 of an inch, is used to quality inspect components prior to assembly.



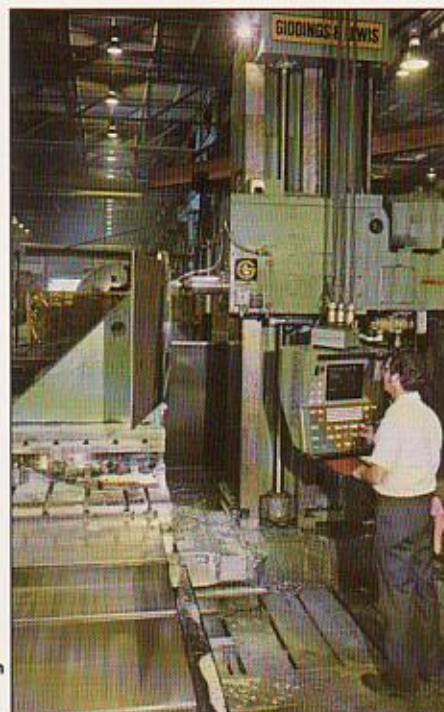
A team assembly concept is used to assure accountability of performance and instill personal pride in the final product.



Quality welds are achieved using roll-over fixtures to position major weldments.



State-of-the-art equipment, operated by trained technicians, at the Lexington plant assures quality and product reliability.





Carefully machined 100,000 psi steel angle chord in high stress corners is precision-fitted to boom sidewalls and offset welded for maximum integrity and strength.

Diamond-shaped impressions are embossed into boom sidewalls for vertical stiffness and rigidity. This process eliminates unnecessary boom weight while increasing strength.

The best part of all . . .

Parts are there when you need them. Within 24 hours an emergency order can be shipped from our parts depot in Chicago, Illinois to any location in the world.

For day-to-day parts availability, the FMC Hydraulic Crane Division offers a state-of-the-art parts program. To minimize downtime and assure on-

the-job performance, your distributor is supplied a Service Life Profile for your crane. This document details parts requirements over time, for the life of the crane. The program is computer monitored from the Lexington plant and is tied in to the Chicago depot for up-to-the-minute information and fast turn around time.

The Service Life Profile provides the basis for efficient in-field parts inventory and allows FMC distributors to react quickly to customers' needs.

The Eighty Series are the machines that can do the job and the FMC Hydraulic Crane Division has made the commitment to keeping them on the job.



The heritage of the past is the promise of the *Eightys*

The newest rough terrain crane models in the FMC Link-Belt® hydraulic crane line are the Eighty Series rough terrain cranes. They are the product of over sixty years of broad experience and technological advancements achieved by FMC engineering. This performance-proven experience is designed into the Eighty Series, making them the cranes for the years to come.

Since 1921, Link-Belt cranes and excavators have been recognized as the on-the-job performers with traditionally high resale values. With a history that includes the development of innovative materials handling equipment, the Link-Belt name today appears on logging equipment, crawler cranes, tower gantry cranes, carrier mounted cable cranes, and rough terrain and carrier mounted hydraulic cranes.

FMC Distributors

The Link-Belt crane tradition is more than just quality products. It is based on a distributor network that works side by side with the crane owner/operator to get the job done. FMC Link-Belt crane distributors have years of experience in selling and servicing cranes. They are backed



by the FMC commitment to quality assurance, parts availability, and in-field service representation. It is this day-to-day effort by FMC manufacturing and distribution that assures the finest hydraulic cranes in the market.

Contact your distributor or FMC Hydraulic Crane Division today. Take the step up into the Eighty's and experience the heritage of Link-Belt cranes.

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