HC-108C Features
Heavy-Duty Carrier
Designed To Excel For Any Job Requirement

The Link-Belt Speeder "108" machine series is recognized throughout the world as one of the most dependable, reliable, and versatile truck cranes available.

Pile driving, clamshell/grapple, or varied lifting crane applications are common assignments for the carrier-mounted Model HC-108C. Rated 50-ton, the HC-108C is available with angle or tubular boom. Optional booms and standard plus optional crane upper features make the HC-108C ideally suited for lifting with the 40' basic boom or with up to 200' of combination tubular boom and jib. A tower attachment consisting of a 110' tower plus 100' boom is also available. (For field conversion to tower attachment, consult the factory.)

The carrier features an 8 x 4 drive for more even distribution of axle loadings, better roadability, and
greater lifting capacity "on tires". Minimum over-all width is 10' 4". Standard are 14.00 x 20-J tires, 8-wheel air brakes with Maxi brakes on rear wheels, parking brake and power hydraulic steering.

The carrier is powered by a diesel engine through a Fuller 5-speed main transmission plus a 3-speed Fuller auxiliary transmission into the planetary-driven rear axles. Provides 15 forward speeds with road speed up to 45 m.p.h.

The carrier cab includes a bucket seat with seat belt, lighter, windshield wiper and washer, horn, fire extinguisher, heater, and defroster. The carrier is also equipped with bus-type mirrors, back-up lights and alarm, tow hooks, fenders, levels, tire gauge and inflation hose. The carrier is built to meet Link-Belt Speeder's design specifications.

Eight hardened, conical hook rollers mounted on anti-friction bearings join the upper to the carrier. Rollers, roller path, and mounting bracket are all heat treated for long, trouble-free service. The conical shape of these rollers matches the taper inside the top and bottom flanges of the roller path for smooth upper and boom swing. Rollers can be adjusted for wear by simply removing shims.

Front and rear outrigger boxes are pin-connected to the carrier frame for quick removal to reduce over-all weight for highway travel. Outriggers are hydraulically operated. A pump driven by the carrier engine supplies hydraulic power. Outrigger controls are conveniently located on each side of the carrier. Separate out and down movement of beams and jacks is possible. Once the outrigger jacks are set, a check valve fixed to the jack cylinder "locks" the oil in the cylinder. Outriggers are double-box construction to provide optimum spread and machine stability. Floats are aluminum.

GENERAL INFORMATION ONLY
Exclusive Full-Function Upper Power Train

Permits Two-Directional Independent Power For Each Machine Function

1 ENGINE: Wide choice of engines equipped with friction clutch, hydraulic coupling, toroidal converter, or 2-speed transmission.

1a. Auxiliary governor control (optional) with torque converter and for lifting crane service only: increases hoist line speed up to 150% when line pull is less than maximum. (Not shown)

2 TRANSMISSION: Engine power to machinery through quadruple roller chain enclosed in chain case. Pump drive via chain and gear reduction.

3 UPPER FRAME: All welded and stress relieved for strength and durability, fine bored for proper shaft and gear alignment. Results in less component wear and lower maintenance costs.

4 SWING: 2-shoe swing clutches transmit power smoothly to the vertical swing shaft. (Only left-hand clutch is visible.) Single bevel pinion on horizontal shaft enclosed in oil (4a).

4a BOOM HOIST: Independent, geared drive with 2-shoe clutch for boom raising and lowering of the boom. Boom raising clutch on opposite end of shaft is not visible.

5 HOIST CLUTCHES: 2-shoe hoist clutches for front and rear rope drums. (Clutch drums only visible.)

6 ROPE DRUM LAGGINGS: Front and rear rope drum laggings bolted to brake drums.

7 DRUM BRAKES: Mechanically operated by foot pedals. Drum brakes separated from clutches (items 5 and 6).

8 LOAD LOWERING CLUTCHES: Optional. Completely independent front and rear drum power load lowering. 2-shoe clutches for powering down light loads and controlled lowering of heavier loads.

9 POWER PACKAGE FOR POWER HYDRAULIC CONTROLS: Vane-type pump, belt driven from engine, pilot-type accumulator, and pump tank. Normal system operating pressure 900 to 1400 p.s.i.

10 CONTROL CONSOLE: Exclusive Speed-o-Matic power hydraulic controls, time-tested and proven throughout the world.
The HC-108C upper machinery design is Link-Belt Speeder's unique but simple Full-Function giving extraordinary crane/excavator performance whatever the job — lifting crane, clamshell, pile driving, demolition, scrap handling, or truck tower application.

What makes Full-Function Design superior to conventional designs? It permits independent or simultaneous performance of all machine functions, increasing on-the-job machine and load handling capability. In addition, it provides for tailoring the machine to the job with the widest choice of money-making options. (See page 8.)

Independent Boomhoist

The fully independent boomhoist features power hydraulic 2-shoe clutch control for both precision raising and lowering of the boom. Boomhoist is gear driven. An automatic, spring-applied rope drum brake is power hydraulically released for boom raising and lowering. Also, a manually controlled drum locking pawl can be set to hold the boom at any operating radius and can provide a back-up for the boomhoist brake.

The swing brake is automatically spring applied and power hydraulically released and can be set to hold upper and boom at any swing position, or it can be set to engage partially for a slight drag when making precision lifts. Swing brake is controlled from operator's position through variable pressure control valve. The HC-108C also features a mechanical swing lock as standard equipment.

For superb control of all the machine functions, the HC108C incorporates Link-Belt Speeder's famous Speed-o-Matic power hydraulic control system. This system is unaffected by day-to-day atmospheric variations and does not require priming or bleeding. Oil under pressure from the belt-driven, vane-type pump or from the pressure/accumulator storage tank does the work. Normal system operating pressure is 900-1,050 p.s.i. The accumulator is precharged to 650 p.s.i.

Short-throw levers in operator control console actuate variable pressure valves from which oil under pressure is metered to each 2-shoe clutch for prompt yet smooth clutch response.

Speed-o-Matic power hydraulics — the exclusive control system that permits the use of 2-shoe clutches for all machine functions — eliminates the need for combining 2-shoe, band, and disc clutches.

The 2-shoe clutches, self-compensating over a wide range of lining wear and heat expansion, are separated from the rope drum brakes to eliminate heat transfer for longer clutch and brake lining life. These clutches can be engaged partially for smooth acceleration and deceleration of swing, hoist, and boom. For maximum line pull, the clutch can be fully engaged by complete application, or toggling-in, of the control lever. The brakes for the front, rear, and optional third operating drums are mechanically operated by foot pedals with latch locks, located beneath the operator control console.
Power hydraulic control for fast and easy counterweight removal is available on the HC-108C... takes only minutes to lower the counterweight to the carrier deck.

Spring-loaded boom backstops offer cushioned action at minimum radius. Rigid type used with angle boom; telescoping type with tubular boom.

Boom angle and load indicating systems are available.

For tubular Hi-Lite boom lengths exceeding 130', the live mast with mid-point boom pendants is required. Live mast equipped with two sheaves can be used as a short boom for handling outrigger boxes, boom sections, and counterweight when dismantling and assembling the machine. Mast must be fully retracted for such use and fully extended for normal use with main boom. Mast hydraulic extend-retract cylinders controlled from operator's position, optional.

Both the angle and tubular boom may be equipped with hoist line supporting rollers mounted on top of the boom. Rollers prevent hoist rope from rubbing the boom lattice. Boom length determines the number of rollers recommended.

For either or both front and rear drum, a dial is mounted on operator control console. Dial is actuated by flexible shaft connected to the drum shaft. Particularly valuable when operating with long boom or boom/jib.

In those areas where travelling with the boom, or boom and jib, folded over the rear is permissible, the HC-108C boom and jib can be equipped with boom folding equipment. Includes wheels with tires on boompeak and single wheel and tire on jib peak plus special pendants and links. (Refer to specification sheet for length of boom that can be folded and clearance height.)
The flexibility of Link-Belt Speeder design makes possible 2-speed front and rear rope drums and, at the same time, retain standard speed for swing, boomhoist, and third drum. Gear-driven arrangement for 2-speed hoist only. Planetary-driven arrangement for both hoist and lowering.

shfts. Planetary is mounted between the drum gear and clutch drum. The planetary arrangement can provide up to 70% increased speed or can be modified to provide 40% decreased speed for either hoisting or lowering. Engaging standard 2-shoe clutch provides standard rope speed; planetaries are controlled by push button located on hoist control lever.

Completely independent, gear-driven third drum is available. Particularly valuable for pile driving operations that require "snaking in" a load. The third drum is high in speed and rope capacity and completely independent of all other machine functions.

can see his work on specialized loading jobs. Elevated portion is hinged for reducing over-all height for transporting.

2-Speed Drums, Gear Driven, Hoist Only

With the gear-driven arrangement, clutches (A) on right end of shafts operate at standard hoist speed. Clutches (B) on left end of shafts operate at 90% higher than normal hoist speed through an added intermediate gear(s) in left side housing. Lever, with this arrangement, clutch-controlled power load lowering is not available and loads must be lowered on the drum brake(s). Control is by pulling the hoist drum lever for standard speed, pushing for high speed.

Third Drum

Elevated operator's cabs, 2' or 4' above standard position, are available. Puts the operator up where he

2-Speed Drums, Planetary Driven, Hoist And Rear Drum Lowering

An exclusive, independent planetary arrangement can be mounted at either or both hoist drums and rear drum lowering ends of extended drum

2-Speed Drums, Planetary Driven, Hoist And Rear Drum Lowering

When the rear drum auxiliary 2-shoe brake is installed, power load lowering, planetary lowering, or 2-speed gear-driven hoist are not available. Field conversion from brake to power load lowering clutch is possible.