

Link-Belt[®]

Wire Rope Crawler Crane

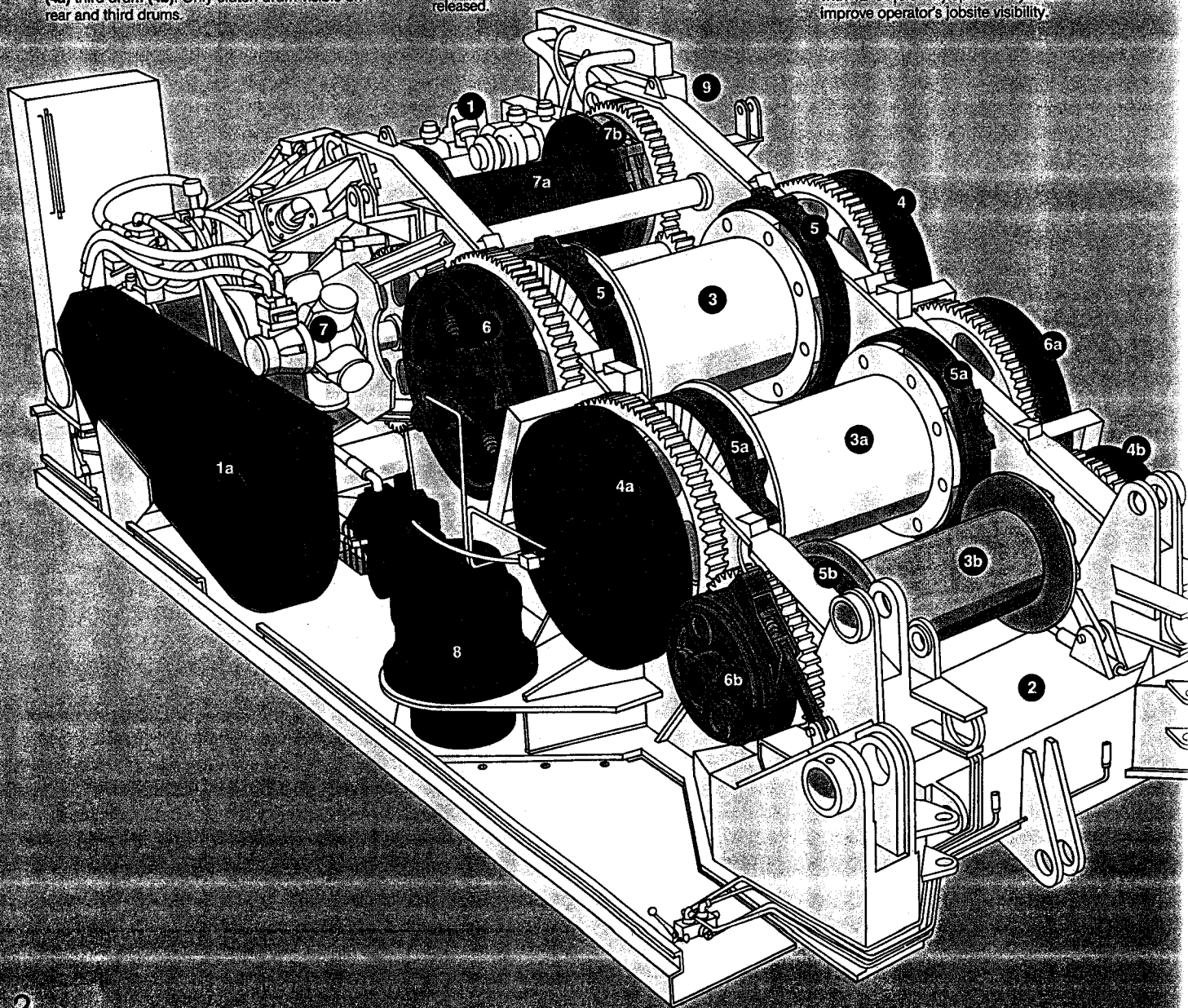
250-ton (226.75 metric ton)



The LS-718 offers a completely new concept in lifting crane design

Independent power flows for all functions

- 1 Engine:** Diesel with single modulated torque converter. Torque converter and roller chain transmission (1a) transmit power for all load hoist drums. Engine pinion, roller chain and chain wheel fully enclosed and running in oil.
- 2 Frame:** Fixture welded and stress relieved for strength and durability, line bore accuracy for proper shaft and gear alignment. Results in less component wear and lower maintenance cost.
- 3 3a, 3b Rope drums:** Large diameter rear (3) and front (3a) rope drums accommodate up to 1,970' (600 m) of 1½" (32 mm) diameter wire rope. Independent 3rd rope drum (optional) (3b).
- 4 4a, 4b Hoist clutches:** Two-shoe hydraulically powered, rear drum (4) front drum (4a) third drum (4b). Only clutch drum visible on rear and third drums.
- 5 5a, 5b Drum brakes:** Dual rear (5) and front (5a) are mechanical with power hydraulic assist. Single third drum (5b) brake spring applied, power hydraulically released.
- 6 6a Power load lowering clutches:** Independent, 2-shoe for powering down light loads and controlled lowering of heavier loads. (Only clutch drum visible on front drum).
- 6b Optional low speed planetary drive unit** for precision power lowering on third drum/tower hoist/Heavy Lift mast drum shaft.
- 7 7a, 7b Boomhoist:** Independent. Two-directional hydraulic motor (7) powers single rope drum (7a) forward and reverse for boom raising/lowering. Engine driven hydraulic pump powers hydraulic motor. Single boomhoist drum brake (7b) is spring applied, power hydraulically released.
- 8 Swing:** Independent. Hydraulic: engine driven hydraulic pump powers hydraulic swing motor attached to two-stage planetary speed reduction unit. Swing pinion mounted on output shaft of reduction unit. A disc swing brake, spring applied and hydraulically released, is mounted on a secondary input shaft of the planetary speed reduction unit.
- 9 Power package for power hydraulic control system** (Not visible, mounts near front of engine). Vane type pump, direct driven from engine, piston type accumulator, sump tank. Normal system operating pressure 900 to 1,050 p.s.i. (6,173 kPa to 7,202 kPa).
- 10 Operator's cab and controls:** Insulated and isolated for sound level reduction. Mounted in a fixed position forward of machinery cab with 12' 6" (3.81 m) operator eye level to improve operator's jobsite visibility.



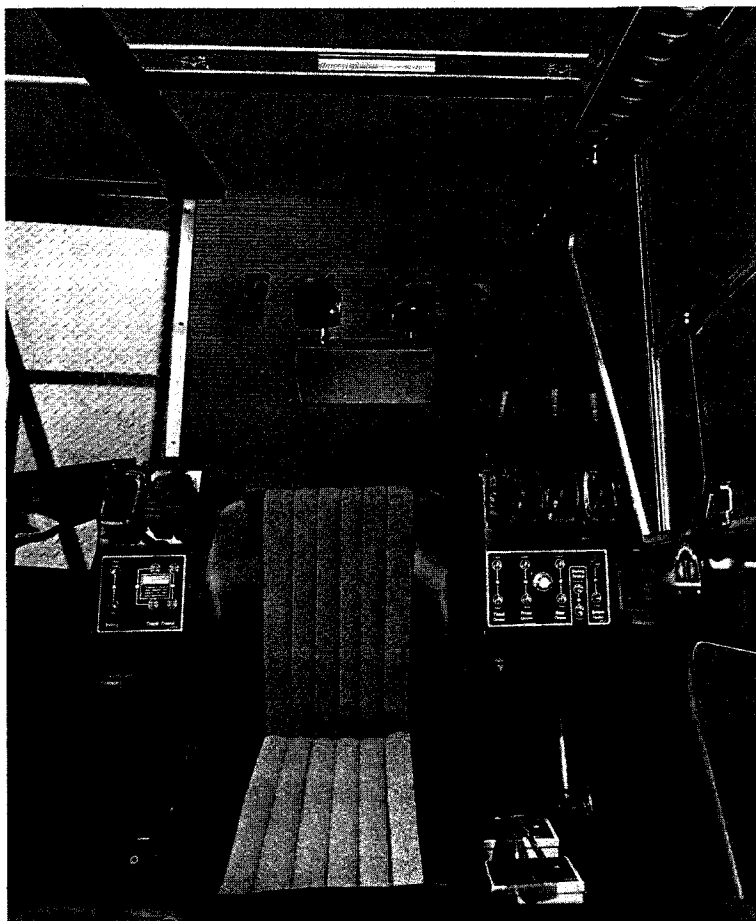
FMC's exclusive and distinguished stylized upperstructure and operator cab

Designed for more effective operator, and on-the-job performance

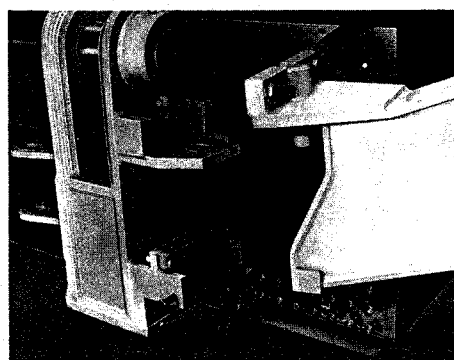
FMC's Construction Equipment Group re-introduces the Link-Belt® LS-718 250-ton (226.75 metric ton) crawler crane with a new look and new features that add even greater job performance.

All the machine functions have completely independent power flow systems, making it possible to perform all the functions independent of one another plus independent as to speed and available power.

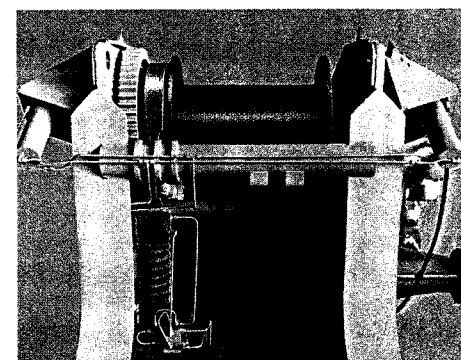
Variable speed swing, along with variable speed load hoist/lowering, variable speed boom hoist/lowering and variable speed travel is possible with the innovative LS-718 design. An engineering design achievement that provides the operator greater on-the-job operating flexibility and crane performance.



Operator's cab



Cab connection



Boomhoist drum and brake

Forward mounted operator's cab

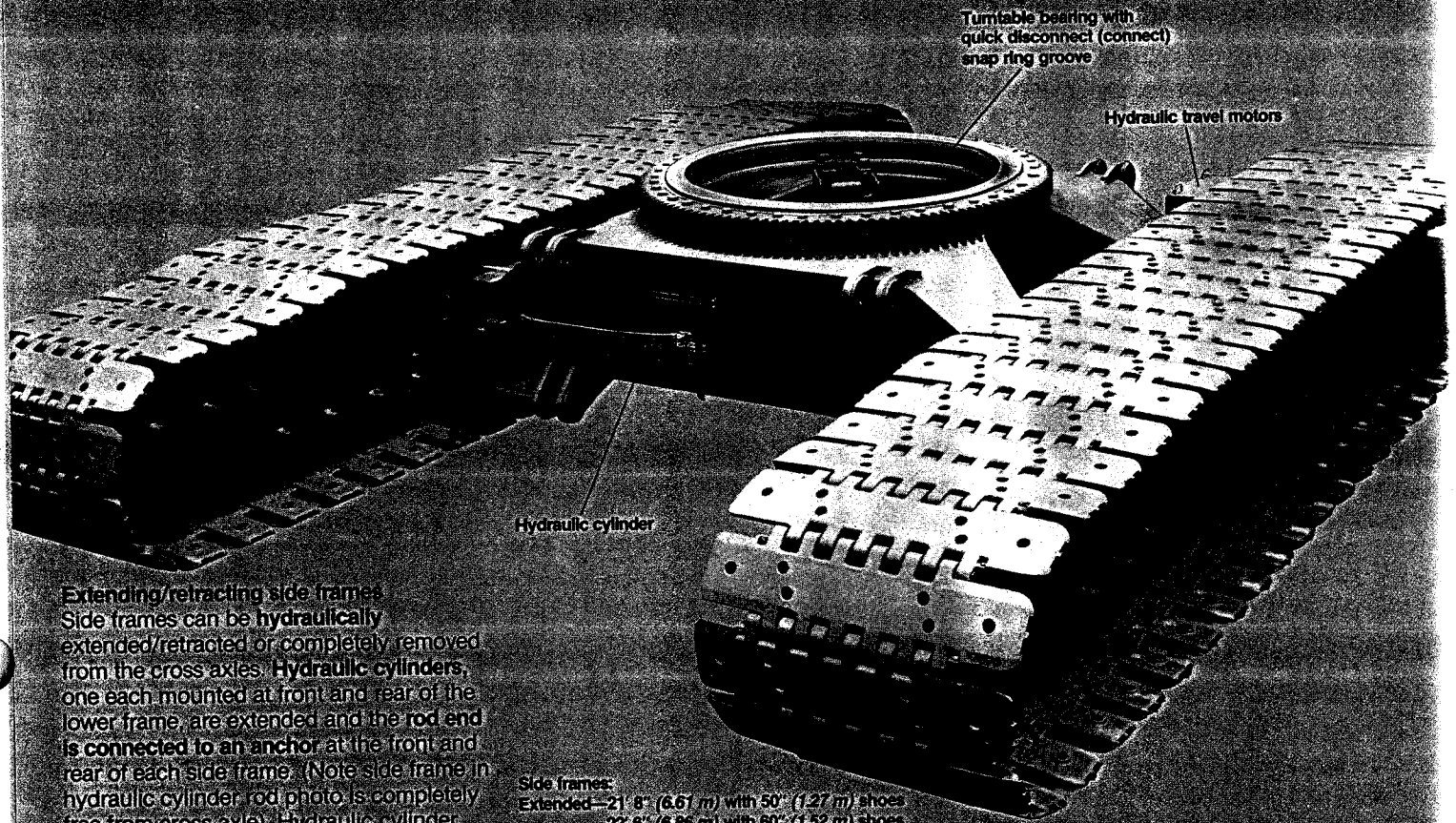
The modular and humanized cab is designed for armchair control and optimum visibility. The main controls consist of load hoist, boomhoist, third drum levers to the right, and swing and travel levers to the left of the operator. Upholstered seat, arm rests, sound reduction materials, etc., are all standard equipment. The forward location, plus 12' 6" (3.81 m) operator eye level, greatly improve the operator's ability to see his working area.

For fast cab mounting and removal, the **cab is connected** to the upper revolving frame by means of a heavy fabricated support arm assembly. The support arm upper bracket has a fixed dowel pin which aligns itself with a support on the upper revolving frame. All hydraulic and electrical lines are match-marked to a "header board" utilizing quick disconnect couplings.

Single boomhoist rope drum and brake
The independent boomhoist is driven by a 2-directional hydraulic motor with power from the diesel engine driven, variable displacement hydraulic pump. The **single boomhoist rope drum brake** is spring applied, power hydraulically released. A rope drum locking pawl, spring applied and hydraulically released, is standard.

LS-718 crawler mounting features hydraulic travel and steer

Side frames are hydraulically removable (optional)

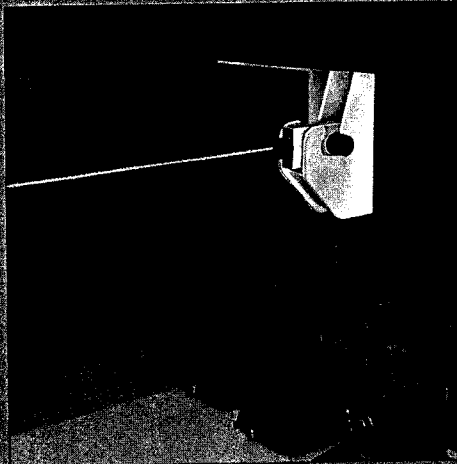


Extending/retracting side frames

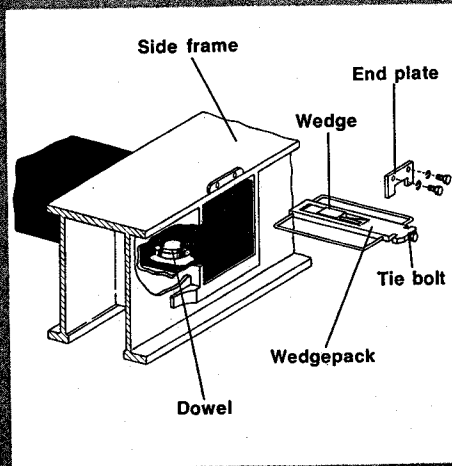
Side frames can be hydraulically extended/retracted or completely removed from the cross axles. Hydraulic cylinders, one each mounted at front and rear of the lower frame, are extended and the rod end is connected to an anchor at the front and rear of each side frame. (Note side frame in hydraulic cylinder rod photo is completely free from cross axle). Hydraulic cylinder controls are located on the rear of the lower frame. Hydraulic travel motor hoses are equipped with quick disconnects.

Side frames:
 Extended—21' 8" (6.61 m) with 50" (1.27 m) shoes
 22' 6" (6.86 m) with 60" (1.52 m) shoes

Retracted—18' 10" (5.74 m) with 50" (1.27 m) shoes
 19' 6" (6.00 m) with 60" (1.52 m) shoes



Hydraulic cylinder rod end connected to anchor on side frame



Removable side frames

Removable side frames

The LS-718 features fast strippdown of the crawler side frames. The side frames are positioned to the lower frame cross axles by a dowel fixed in the bottom of each side frame window. The dowel fits in a circular recess on the underneath side of the cross axle. A wedgepack is then placed above each cross axle inside the window of the side frame. By means of a tie bolt, the wedge is drawn up the inclined plane, locking each side frame to its respective cross axle. End plate secures wedgepack in position. An FMC patented feature.

Fast disconnect (and connect) of upperstructure from the crawler mounting

Saves valuable job-to-job transportability time

FMC's Construction Equipment Group has designed and patented a quick disconnect (and connect) turntable bearing for the Link-Belt® LS-718 crawler crane. This exclusive and ingenious device allows for fast mounting and connecting (or undocking and lifting off) the upper structure to the crawler mounting. It eliminates the necessity of inserting (or removing) a series of highly torqued turntable bearing mounting bolts, or for installing (or removing) front and rear hook rollers in order to connect (or disconnect) the revolving upperstructure to the crawler mounting.

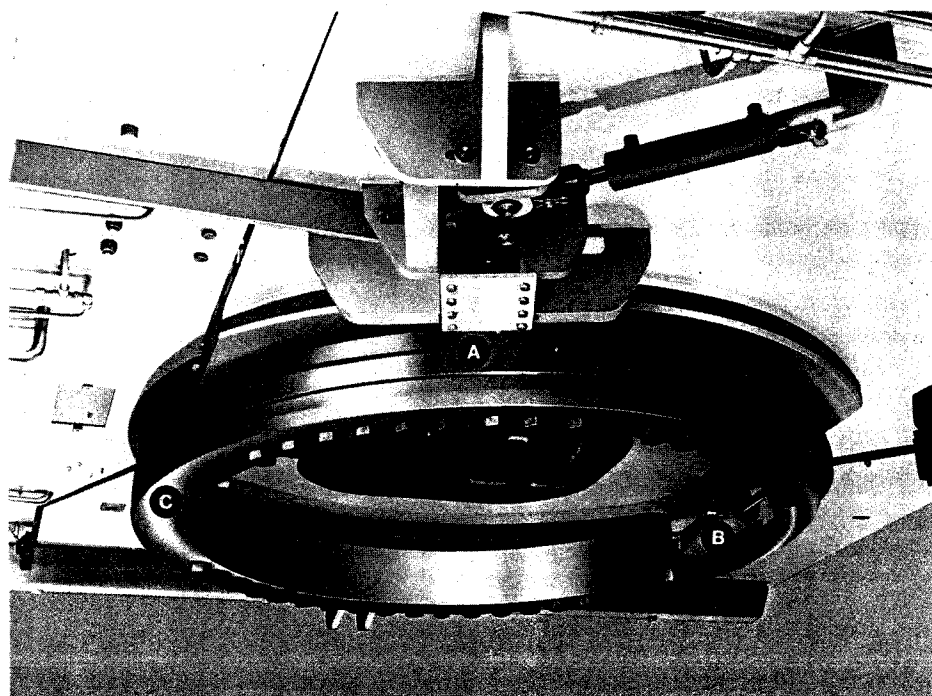
Adaptor and snap ring

The quick disconnect (connect) snap ring (A), with its hydraulic actuating cylinder (B), are mounted to the revolving upper structure mounting adaptor (C). The adaptor is bolted to the underside of the upperstructure. In mounting the upper to the crawler lower, it is lowered to a position where the adaptor is within the inner race of the bearing, thus permitting hydraulically engaging the snap ring in the groove in the bearing inner race. Connection of the upperstructure to the crawler mounting is maintained by the snap ring being securely seated within its groove in the mounting adaptor and the groove in the bearing inner race.

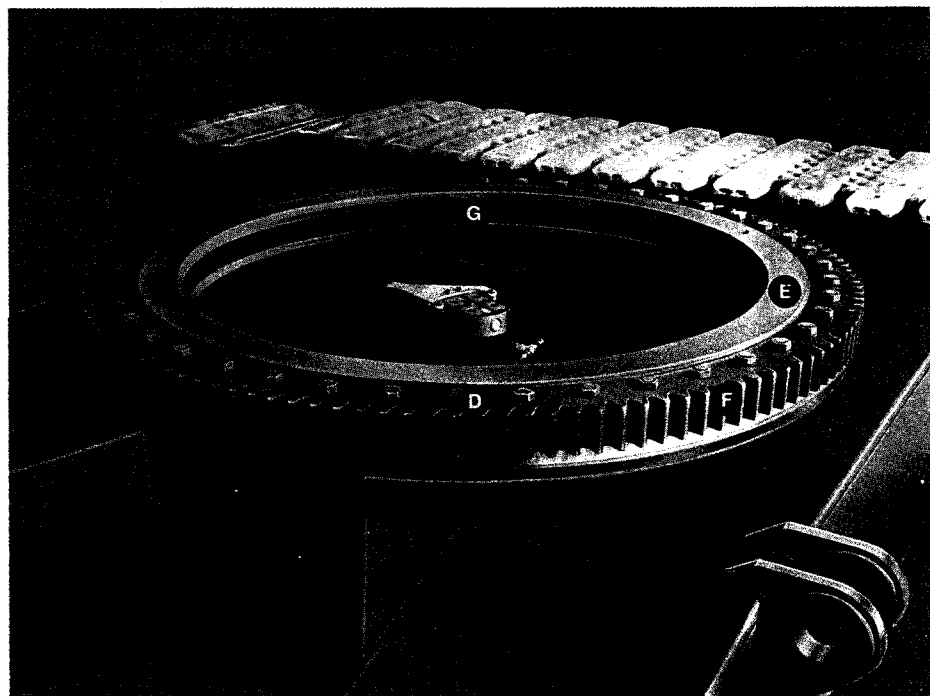
Turntable bearing mounting

The complete bearing with outer race (D) and inner race (E) is bolted on top of the lower frame carbody. External tooth ring (swing) gear (F) is integral with bearing outer race. Note the quick disconnect (connect) snap ring groove (G) in the inner side of the bearing inner race.

Undocking (disconnect) the upperstructure from the crawler mounting simply requires hydraulically disengaging the snap ring from the groove in the bearing inner race and lifting the upperstructure off the mounting with an auxiliary lifting device.



Adaptor and snap ring



Turntable bearing mounting

Pin-connected tubular boom and jib to maximum 450' (137 m)

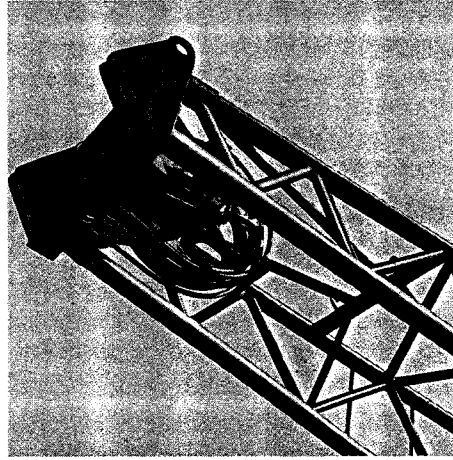
Choice of long range and heavy duty booms available

The LS-718 features a pin-connected tubular boom and jib. Tubular boom chord members are 100,000 p.s.i. (689 500 kPa) quench and tempered, high strength alloy steel. The tubular boom represents the latest advances in boom design, and is precision built with special automatic machine tools and fixtures. Machine-coped lattice ends match the contour of the round, alloy steel tubular chords and are carefully welded in place with 360° welds.

Heavy duty boom

To meet users' job requirements, the LS-718 may be equipped with the **heavy duty boom**, or the **long range boom**. The heavy duty boom is available with boom top section with **6-sheave boom peak**. Basic boom is 70' (21 m), 2-piece, pin-connected with 20' (6 m), 30' (9 m), 40' (12 m) and 50' (15 m) extensions available up to a 290' (80 m) maximum length.

Also available is a 35-ton (31.75 metric ton) capacity, 2-piece 50' (15 m) jib with 20' (6 m) and 30' (9 m) extensions available for a maximum jib length of 120' (36 m).

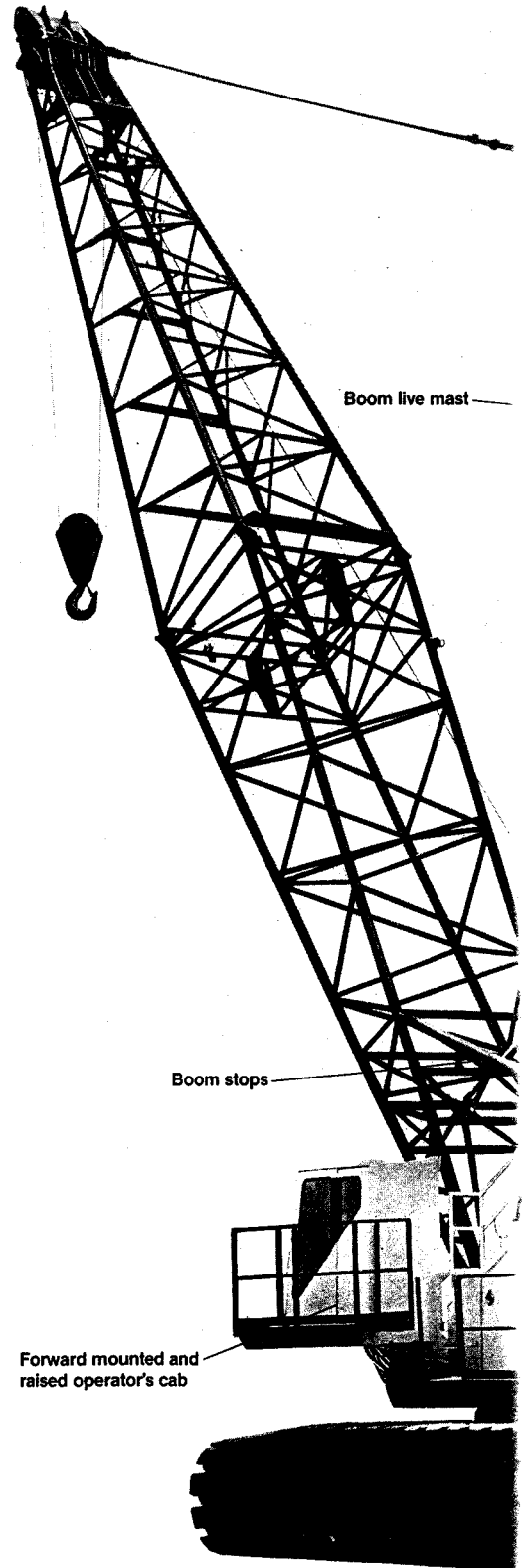


Long range boom, 2-sheave boom peak

available up to a maximum length of 360' (109 m).

Also available is a 15-ton (13.60 metric ton) capacity, 2-piece 30' (9 m) jib with 20' (6 m), 30' (9 m) and 40' (12 m) extensions available for a maximum jib length of 100' (30 m).

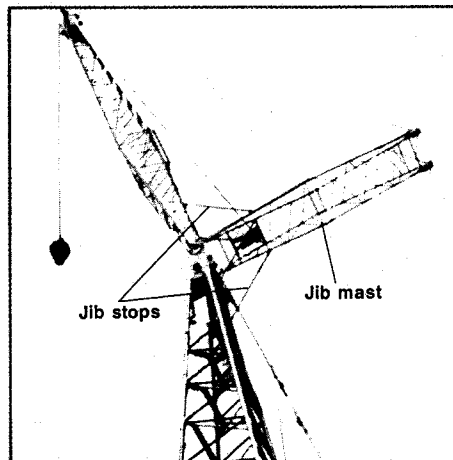
To further meet users' demands, a **tower attachment** and a **Heavy Lift attachment** are also available.



Heavy duty boom, 6-sheave boom peak

Long range boom

The **long range boom** is equipped with a boom top section with **2-sheave boom peak**. Basic boom is 100' (30 m) 2-piece pin-connected with 20' (6 m), 30' (9 m), 40' (12 m) and 50' (15 m) extensions



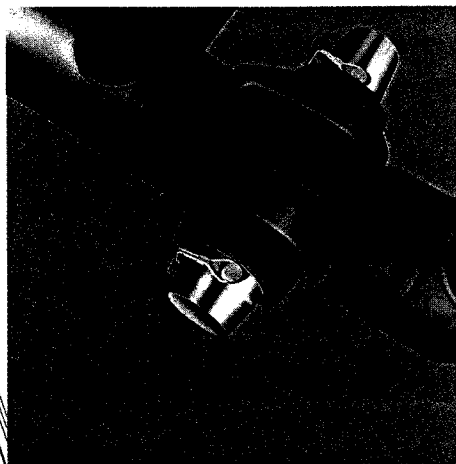
Jib stops and mast

Tubular jib mast

The **jib mast** is pinned to the jib base. Front and rear **jib stops** are telescoping type.

Boom peak sheaves in both booms, as well as jib peak sheaves and jib mast rope deflector sheaves, are mounted on anti-friction bearings to eliminate the need for daily lubrication.

Forward mounted and raised operator's cab



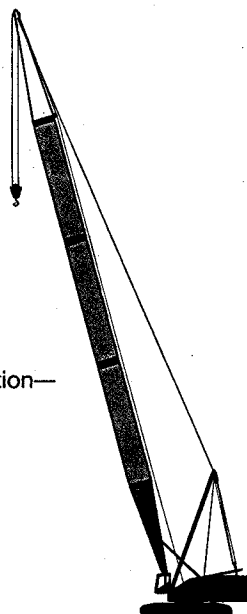
In-line pin lugs

Boom attachment

The method of welding the **in-line pin lugs** to the round tube chords minimizes stress concentration and is an exclusive development of FMC engineering and manufacturing technology. The extended hub on the female connection serves as an anchor for the jib guyline, midpoint pendants, or for pendant lines when assembling the boom. The boom pin-connection tapered end pin is held in place with latch pin.

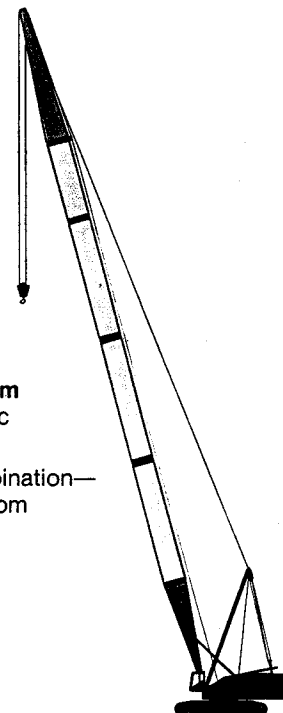
LS-718 attachment component interchangeability

Versatile design permits interchangeability of attachment components to minimize job-to-job rigging time, transportation costs and storage problems. Color coded components below indicate interchangeability between attachments.



Heavy duty boom
70' (21 m) basic boom length

Maximum combination—
240' (73 m) boom
+ 120' (37 m) jib



Long range boom
100' (30 m) basic boom length

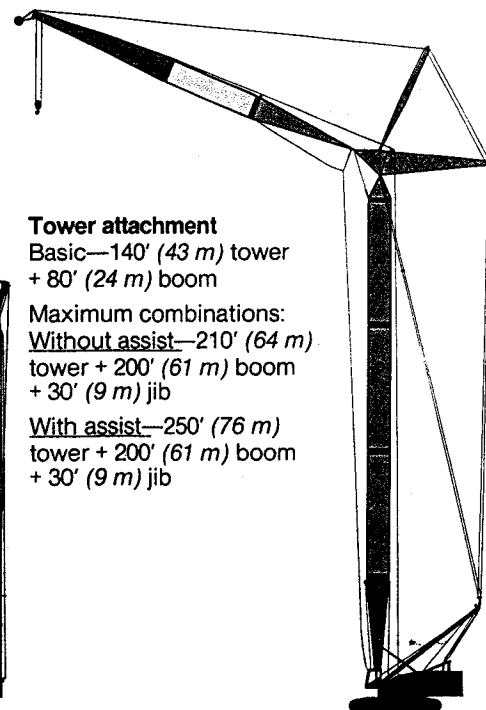
Maximum combination—
350' (107 m) boom
+ 100' (30 m) jib

Jibs

Available for each attachment.

Jibs for heavy duty boom and Heavy Lift attachment are interchangeable.

Jibs for long range boom and tower attachment are interchangeable.



Tower attachment

Basic—140' (43 m) tower
+ 80' (24 m) boom

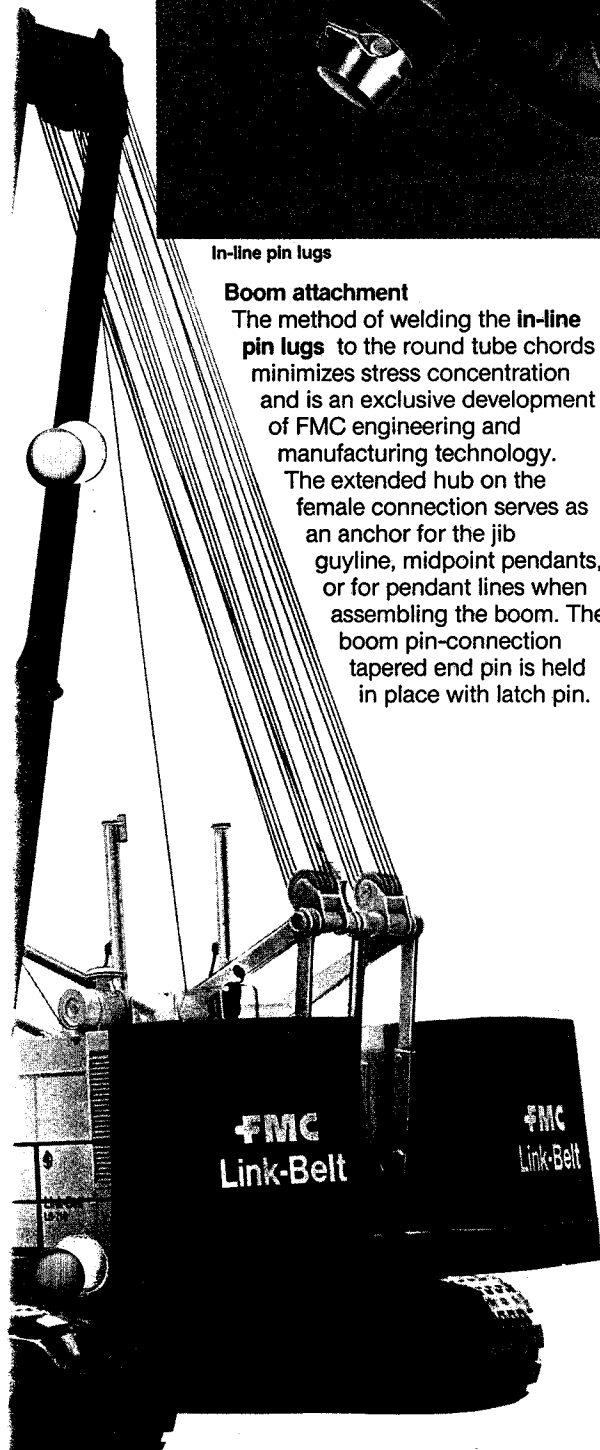
Maximum combinations:
Without assist—210' (64 m)
tower + 200' (61 m) boom
+ 30' (9 m) jib

With assist—250' (76 m)
tower + 200' (61 m) boom
+ 30' (9 m) jib

Heavy Lift attachment

140' (43 m) basic boom length

Maximum combination—
370' (113 m) boom
+ 120' (37 m) jib



LS-718 features fast stripdown of counterweight, boom and side frames

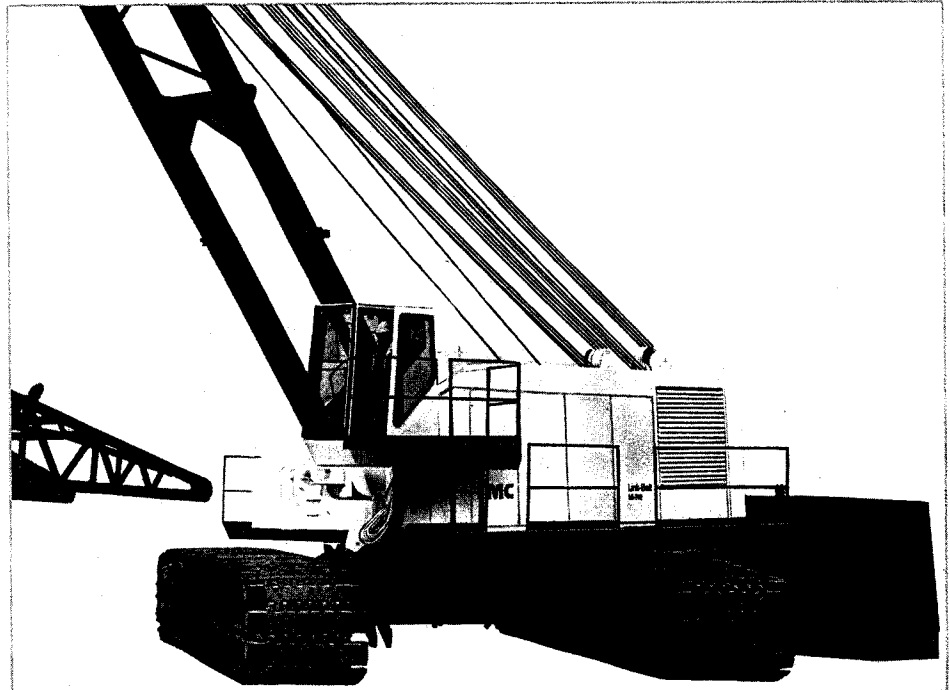
For job-to-job machine transportability

The Link-Belt® LS-718 250-ton (226.75 metric ton) crawler crane is designed for **fast, on-the-job self-erection or self-stripdown** of counterweight, boom and side frames, reducing the weight of the major components to a transportable weight.

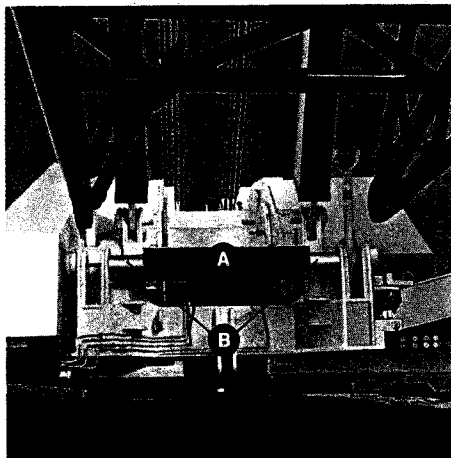
Removable side frames

The **removable side frames** can be hydraulically extended/retracted and completely removed from the cross axles. (Refer to page 4 for details on hydraulic side frame removal.) With the lower frame properly blocked, the LS-718 can hoist and load the side frames on the haul unit.

Catwalks and railings are readily removable.

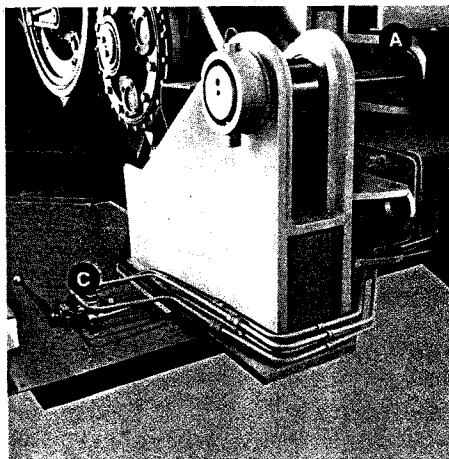


Fast on-the-job stripdown



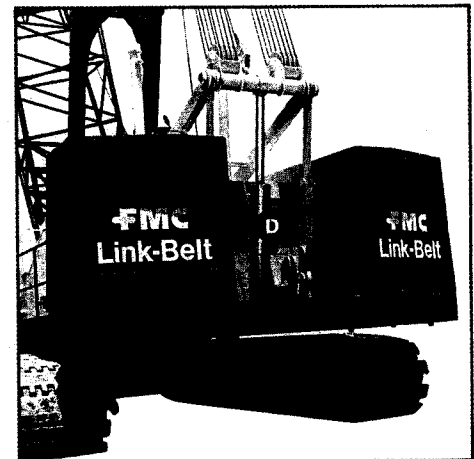
Boom foot pins removed hydraulically

For fast removal (or installation) of the basic boom, the **boom foot pins are removed with power hydraulics**. A double-acting cylinder (A) with integral cylinder rods/pins (B) is permanently mounted between boom foot lugs.



Boom foot cylinder controls

Cylinder controls (C) are located inside the right front corner of the machinery cab to permit controlling cylinder from ground.



Counterweight raising/lowering

The **counterweight** is quickly **raised or lowered** with a hydraulic cylinder (D) on to 24" (0.61 m) of blocking. Hydraulic cylinder controls are located in the left rear of the machinery cab.

We are constantly improving our products and therefore reserve the right to change designs and specifications.

FMC Corporation Construction Equipment Group Cedar Rapids Iowa 52406

Link-Belt® cranes & excavators manufactured in: Cedar Rapids Iowa • Lexington & Bowling Green Kentucky • Ontario Canada • Milan Italy • Queretaro Mexico & Nagoya Japan (under license)