



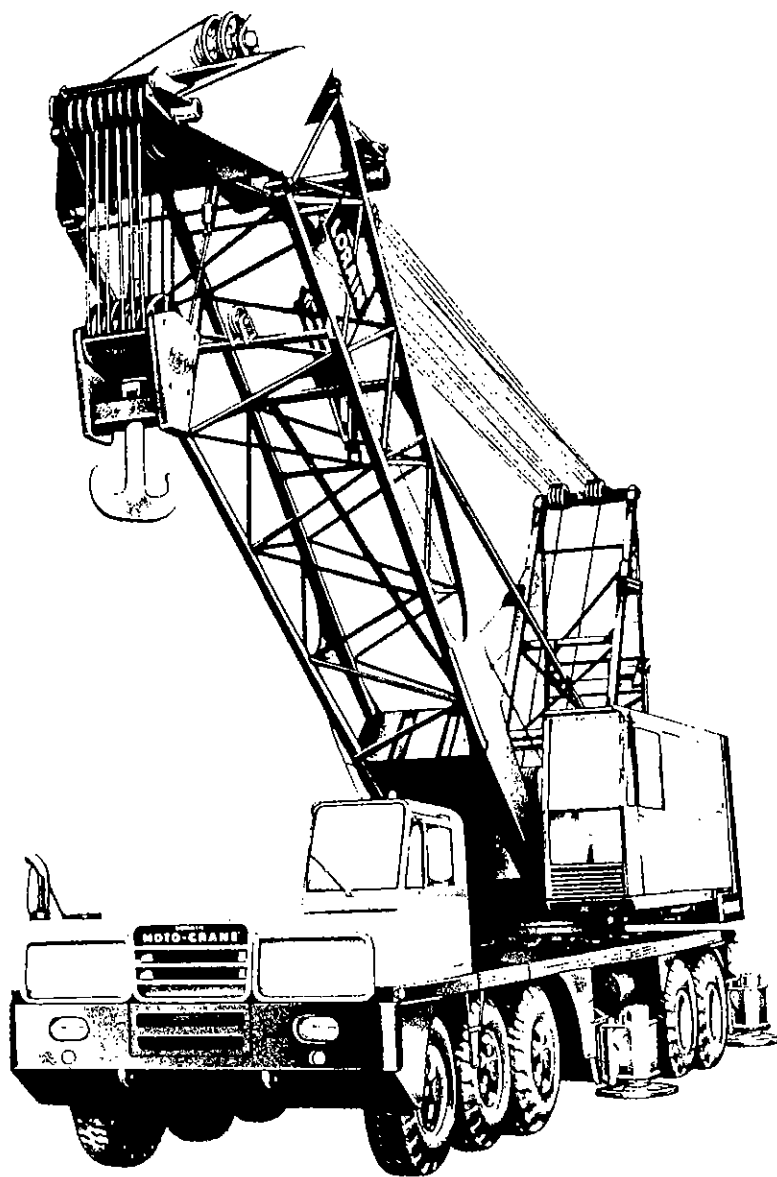
VALUE IS OUR FIRST SPECIFICATION

LORAIN MC-8150

MOTO-CRANE[®]

SPECIFICATIONS

10X4



OUTSTANDING PERFORMANCE FEATURES

TANDEM DRUM DESIGN . . . for outstanding cable capacity.

ALL-GEAR DRIVE . . . enclosed gears lubricated by forced filtered oil.

HYDRAULIC SWING . . . independent precision control.

ONE-PIECE TURNTABLE BED AND SIDE FRAMES . . . maximum strength, perfect shaft alignment.

VERY LOW WEIGHT for its rating, for better roadability.

BRAND NEW SUPERSTRUCTURE DESIGN.
LORAIN-DESIGNED AND BUILT CARRIER
10 x 4, box frame chassis, planetary axles.

HAMMERHEAD BOOM PEAK . . . for short boom, maximum lifts.

LONG TAPERED BOOM PEAK . . . available for maximum reaches, capacities.

POWER LOAD LOWERING . . . available on both hoist drums.

EXCLUSIVE SQUARE-TUBULAR-CHORD BOOM . . . round tubular lacing . . . aircraft type alloy steel . . . long-lived, light weight, sturdy.

POWERSPAN OUTRIGGERS . . . set in seconds, precise leveling, plus straight down motion.

EXCLUSIVE SHEAR-BALL[®] TURNTABLE CONNECTION . . . 10-year written warranty.

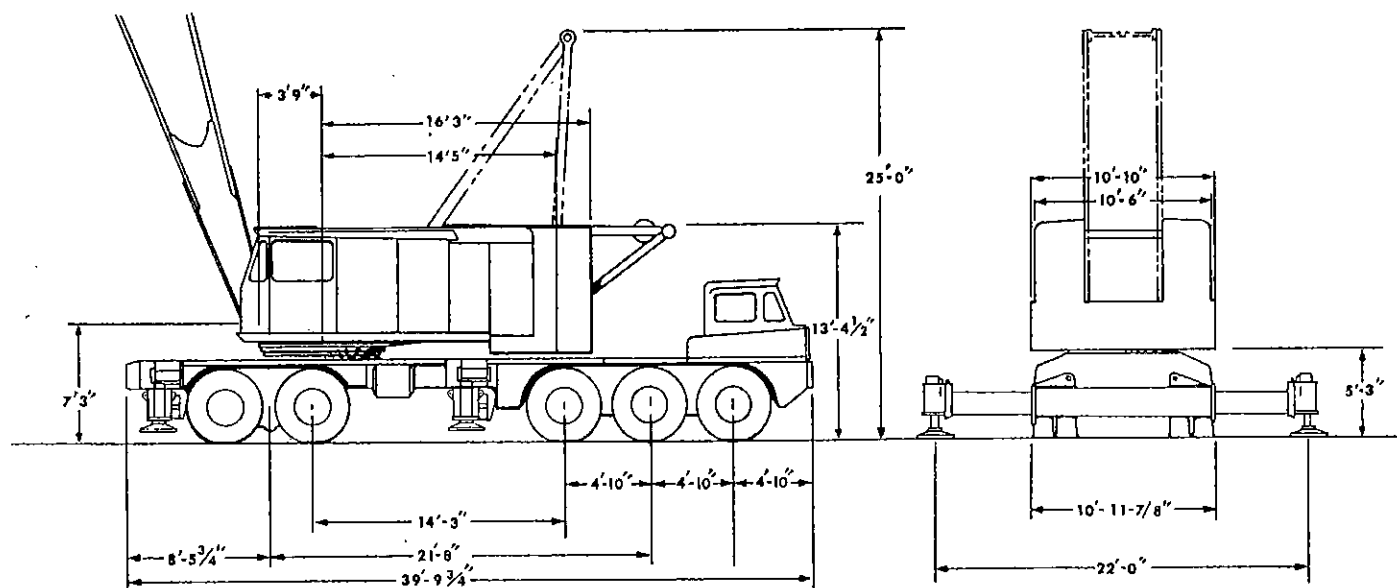
BIG, DUAL DRUM, 2-SPEED BOOM HOIST . . . metered air controls.

RETARDER . . . for precision work . . . standard.

TORQUE CONVERTER . . . standard.



DIMENSIONS AND SPECIFICATIONS... 10X4... D-21 BOOM



TURNTABLE SPECIFICATIONS

Power	Cummins N-855-C-TC, 6 cyl.
Diesel	5 1/2 in. x 6 in.
Bore and Stroke	855 cu. in.
Displacement	246 H.P.
Horsepower	Torque Converter
Power Take-Off	100 gals.
Fuel Tank	

Operating Characteristics

Line Pulls and Line Speeds:	Hand Throttle	Foot Throttle
Rear Drum 25" P.D. Lagging		
1st Layer	26,940# @ 196 F.P.M.	21,870# @ 297 F.P.M.
3rd Layer	23,620# @ 224 F.P.M.	19,170# @ 340 F.P.M.
Front Drum 21" P.D. Lagging		
1st Layer	30,470# @ 166 F.P.M.	24,730# @ 252 F.P.M.
3rd Layer	25,600# @ 198 F.P.M.	20,775# @ 300 F.P.M.
Swing Speed		0-4 R.P.M.

Controls

Hoist and Derricking Clutches	Metered Air
Swing	Independent Hydraulic

Other Equipment

Boom Hoist	2-Speed, Dual Drum
Gantry	Power Operated Back Hitch
Counterweights (with Hydraulic Kit for Removal)	24,100 and 34,500 lbs.

Turntable Connection	Internal Gear Shear-Ball®
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MOTO-CRANE SPECIFICATIONS

Power	Cummins, NTC-335, 6 cyl.
Diesel	5 1/2 in. x 6 in.
Bore and Stroke	855 cu. in.
Displacement	335 H.P.
Horsepower	Plate Clutch
Power Take-Off	
Fuel Tank	120 gals.

Transmissions

Main	11 Speeds
Auxiliary	3 Speeds
Speeds Forward	33
Speeds Reverse	6

Speeds:	Low-low	0.7 M.P.H.	High-high	38.0 M.P.H.
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Outriggers	POWERSPAN, Hydraulically Operated, Complete with Floats.
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Rear Bogie

Axles (Planetary)	Double Reduction Gear Drive
First reduction thru hypoid gears; final reduction thru planetary wheel hubs; high-traction differentials. Interaxle differentials with lockout.	

Mounting	Two axles in tandem, with "through-drive", mounted on equalizer beams.
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Front Tridem	Three non-driving axles on equalizer beams
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Steering	Centralized, Hydraulic Power Assist
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Turning Radius (to Front Corner of Vehicle)	67 ft.
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Brakes (Spring-set for Emergency and Parking)	Air
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Rear	4 Brakes; 20 in. dia. x 7 in. wide
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Front	6 Brakes; 17 in. dia. x 4 in. wide
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Tires (Tube)	14:00 x 24, 18-P.R.
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Guide Rails for undecking turntable	Available
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BOOM EQUIPMENT

Crane Boom	
Design	Square-Tubular-Chord
Type of Connection	Pin-Connected
Basic Length—Hammerhead Boom	33 ft; 30-ft. base, 3 ft. top
Long Tapered Boom	90 ft; 30-ft. base, 60 ft. (2 pc) top
Number of Hoist Line Sheaves on Anti-Friction Bearings	
Hammerhead Boom	6
Long Tapered Boom	4
(Additional Sheave Available for Hammerhead Boom)	

Jib

Two-Piece*Pin-Connected Type	30 ft.
*Extendible with 10-ft. & 20-ft. Center Sections to 70 ft.	

Lifting Crane Component

Lagging	21 in. and 25 in. P.D. Full Width
Floating Harness	16 Parts of Line
Boom Stops	Telescopic Type
Swing Brake	Standard
Harness Extending Cylinder	Standard
Retarder	Standard
Power Load Lowering Both Hoist Drums	Available
Third Drum	Available
High Speed Hoist	Available

APPROXIMATE SHIPPING WEIGHTS*

Standard Equipped Machines with Basic Boom	
Lifting Crane (Hammerhead Boom)	201,500 lbs.
*Total weight of unit may be reduced 58,600 lbs. by taking off removable counterweights for road travel—(hydraulic removal kit included.) Additional reductions may be made by removal of outriggers boxes and beams and undecking turntable.	

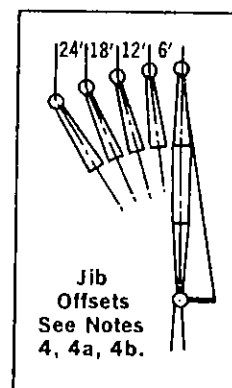
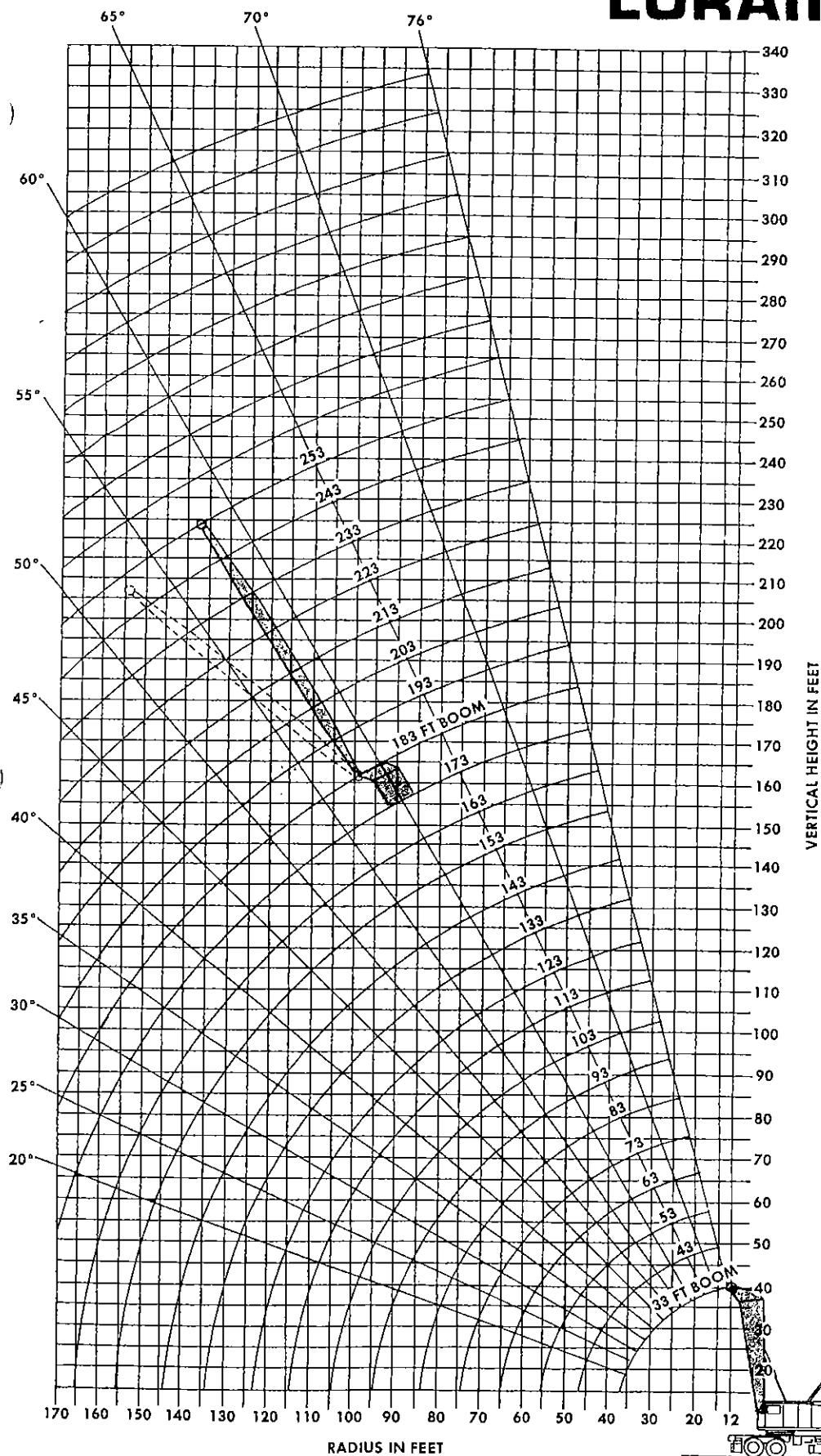


VALUE IS OUR FIRST SPECIFICATION

LORAIN

MC-8150

**MOTO-CRANE
LIFTING CAPACITIES
AND WORKING RANGES**



**D-21 BOOM
WORKING
RANGES
MC-8150
10X4**

**HAMMERHEAD
BOOM**



MC-8150 WITH D-21 HAMMERHEAD BOOM - 10 X 4 CRANE LIFTING CAPACITIES - POUNDS

MAXIMUM COUNTERWEIGHT												
Boom Length	Radius	Boom Angle	With Outriggers Over Rear And Side	Boom Length	Radius	Boom Angle	With Outriggers Over Rear And Side	Boom Length	Radius	Boom Angle	With Outriggers Over Rear And Side	
33 Ft.	12	82.5	300000	123 Ft.	30	79.4	123400	CAPACITIES BELOW INCLUDE JIB (See Note 4a)				
	15	73.2	248300		193 Ft.	40	74.6	81000	40	80.2	30000	
	20	68.0	193400			50	69.6	58900	50	77.2	30000	
	25	57.9	155000			60	64.6	45600	60	74.2	30000	
	30	45.9	126200			70	59.3	36700	80	67.8	20000	
43 Ft.	15	80.2	247500			80	53.7	30300	100	61.3	19900	
	20	73.2	192800			90	47.6	25400	120	54.2	14400	
	25	66.1	154500			100	40.7	21700	140	46.4	10600	
	30	58.4	126100			110	32.7	18700	160	37.4	7800	
	40	39.6	82600			120	22.0	16200	180	25.7	5700	
53 Ft.	15	82.0	247000	133 Ft.	30	80.2	116800	203 Ft.	45	79.1	30000	
	20	76.5	192300		40	75.8	80800		50	77.9	30000	
	25	70.8	154000		50	71.4	58700		60	75.0	30000	
	30	64.9	125900		60	66.7	45400		80	69.0	20000	
	40	51.9	82400		70	61.9	36500		100	62.9	19600	
50	35.1	60500	80		56.9	30000	120		56.3	14100		
63 Ft.	20	78.7	191900		143 Ft.	90	51.5		25200	140	49.1	10300
	25	74.1	153500			100	45.6		21400	160	41.0	7600
	30	69.2	125700			110	39.0		18400	180	31.3	5400
	40	58.9	82200			120	31.4	16000	200	16.9	3800	
	50	47.2	60300	130		21.1	13900	213 Ft.	45	79.8	30000	
60	31.9	47100	153 Ft.	35		78.9	98200		50	78.4	30000	
73 Ft.	20	80.2		191400		40	76.9		80600	60	75.7	30000
	25	76.3		153100		50	72.7		58500	80	70.1	20000
	30	72.2		125600		60	68.3		45200	100	64.2	19400
	40	63.6		82000		70	64.0		36200	120	58.0	13900
	50	54.3		60100	80	59.5	29800		140	51.4	10100	
60	43.4	46800		90	54.7	24900	160		44.1	7300		
70	29.4	38000		100	49.5	21200	180		35.5	5200		
83 Ft.	20	81.3		184700	163 Ft.	110	43.9	18200	200	24.4	3500	
	25	77.9		152300		120	37.6	15700	223 Ft.	45	80.2	22000
	30	74.3	125400	130		30.2	13700	50		79.0	22000	
	40	66.9	81800	140		20.3	11900	60		76.4	22000	
	50	59.1	59800	173 Ft.		35	79.7	96400		80	71.0	14000
60	50.5	46600	40			77.7	80400	100		65.4	14000	
70	40.4	37700	50			73.9	58300	120		59.7	13600	
80	27.4	31300	60			69.9	44900	140		53.5	9800	
93 Ft.	25	79.2	151800			70	65.8	36000		160	46.7	7000
	30	76.0	125300			80	61.7	29500		180	39.0	4900
	40	69.4	81600		90	57.3	24700	233 Ft.	50	79.4	15000	
	50	62.8	59600		100	52.7	20900		60	76.9	15000	
	60	55.5	46400		110	47.7	17900		80	71.8	10000	
70	47.4	37500	120		42.3	15400	100		66.5	10000		
80	38.0	31000	130	36.3	13400	120	61.0		10000			
90	25.7	26200	140	29.1	11700	140	55.2		9500			
103 Ft.	25	80.2	149800	183 Ft.	150	19.6	10200		160	49.0	6700	
	30	77.4	125100		193 Ft.	40	78.4		80200	180	42.0	4600
	40	71.7	81400			50	74.9		58000	243 Ft.	50	79.8
	50	65.6	59400			60	71.2	44700	60		77.5	12000
	60	59.3	46100			80	63.5	29300	80		72.6	8000
70	52.5	37200	100			55.9	20700	100	67.5		8000	
80	44.9	30800	120			46.1	15200	120	62.4		8000	
90	36.0	25900	140			35.0	11400	140	56.9		8000	
100	24.3	22200	160			18.9	8600	160	51.0		6500	
113 Ft.	25	81.0	140900			203 Ft.	170	18.2	7300		180	44.6
	30	78.5	124900	213 Ft.	40		79.7	75800	253 Ft.		50	80.0
	40	73.3	81200		50		76.6	57600		60	77.7	10000
	50	67.8	59200		60		73.3	44200		80	73.1	7000
	60	62.3	45900		80		66.6	28800		100	68.1	7000
70	56.3	37000	100		59.6		20100	120		63.3	7000	
80	49.9	30500	120		52.0		14700	140		58.1	7000	
90	42.7	25700	140		43.4		10900	160		52.6	6200	
100	34.2	21900	160		33.0		8100	180		46.6	4100	
110	23.1	18900	180		17.6		6000					

**STANDARD COUNTERWEIGHT (24,100 LBS.)**

Boom Length	Radius	Boom Angle	With Outriggers		Without Outriggers		Boom Length	Radius	Boom Angle	With Outriggers		Without Outriggers		Boom Length	Radius	Boom Angle	With Outriggers		Without Outriggers	
			Over Rear And Side	Over Side	Over Rear	Over Side				Over Rear And Side	Over Rear	Over Side	Over Rear And Side				Over Rear	Over Side		
33 Ft.	12	82.5	300000	122900	117700	123 Ft.	30	79.4	88200	33900	29400	CAPACITIES BELOW INCLUDE JIB (See Note 4a)								
	15	73.2	224500	90100	83600		40	74.6	56000	22500	19000									
	20	68.0	171300	61600	55500		50	69.6	39600	15900	13100									
	25	57.9	120600	46200	40900		60	64.6	29900	11700	9300									
	30	45.9	89600	36600	32000		70	59.3	23400	8800	6700									
43 Ft.	15	80.2	224000	89800	83400		80	53.7	18900	6600	4700	193 Ft.	40	80.2	30000	20400	16900			
	20	73.2	170800	61300	55300		90	47.6	15500	4900	3200		50	77.2	30000	13900	11000			
	25	66.1	120500	45900	40600		100	40.7	12800	3600	60		74.2	28300	9600	7300				
	30	58.4	89500	36300	31700		110	32.7	10700		80		67.8	17200	4500					
	40	39.6	57400	24900	21300		120	22.0	9000		100		61.3	11100						
53 Ft.	15	82.0	223800	89500	83100		133 Ft.	30	80.2	88000	33600	29100	203 Ft.	45	79.1	30000	16400	13300		
	20	76.5	170400	6100	55000			40	75.8	55800	22200	18700		50	77.9	30000	13600	10800		
	25	70.8	120400	45600	40300	50		71.4	39400	15700	12800	60		75.0	28100	9400	7000			
	30	64.9	89300	36000	31400	60		66.7	29600	11400	9000	80		69.0	16900	4200				
	40	51.9	57200	24600	21000	70		61.9	23200	8500	6400	100		62.9	10800					
63 Ft.	20	78.7	170000	60700	54700	80		56.9	18600	6300	4400	120	56.3	6900						
	25	74.1	120200	45300	40100	90		51.5	15200	4600	3000	140	49.1	4200						
	30	69.2	89100	35700	31100	100		45.6	12600	3300		45	79.8	30000	16100	13100				
	40	58.9	57100	24300	20700	110		39.0	10500			50	78.4	30000	13300	10500				
	50	47.2	40800	17700	14800	120		31.4	8800			60	75.7	27800	9100	6700				
73 Ft.	20	80.2	169500	60400	54400	143 Ft.		35	78.9	68800	26700	22700	213 Ft.	80	70.1	16700	3900			
	25	76.3	120100	45000	39800			40	76.9	55600	21900	18400		100	64.2	10500				
	30	72.2	89000	35400	30800		50	72.7	39200	15400	12500	120		58.0	6700					
	40	63.6	56900	24000	20400		60	68.3	29400	11100	8700	140		51.4	4000					
	50	54.3	40600	17400	14500		70	64.0	23000	8200	6100	223 Ft.		45	80.2	22000	15800	12800		
60	43.4	31000	13200	10700	80		59.5	18400	6000	4200	50		79.0	22000	13000	10200				
70	29.4	24600	10300	8100	90		54.7	15000	4300		60		76.4	22000	8800	6400				
83 Ft.	20	81.3	169000	60100	54100		153 Ft.	90	49.5	12300				80	71.0	14000	3600			
	25	77.9	120000	44700	39500			100	43.9	10200			100	65.4	10300					
	30	74.3	88800	35100	30500			110	37.6	8500			120	59.7	6400					
	40	66.9	56700	23700	20100			120	30.2	7100			140	53.5	3700					
	50	59.1	40400	17100	14200			130	20.3	5800			233 Ft.	50	79.8	12000	12000	9600		
	60	50.5	30800	12900	10500	140		18.9	3400			60		77.5	12000	8200	5800			
	70	40.4	24400	10000	7800	150		19.6	4500			80		72.6	8000	3000				
	80	27.4	19900	7800	5900	160						100		67.5	8000					
93 Ft.	25	79.2	119900	44400	39200	163 Ft.		40	78.4	55300	21300	17800	243 Ft.	120	62.4	5900				
	30	76.0	88700	34800	30200			50	74.9	38700	14800	11900		50	79.8	12000	12000	9600		
	40	69.4	56500	23400	19800			60	71.2	29000	10500	8100		60	77.5	12000	8200	5800		
	50	62.8	40200	16800	13900			80	63.5	17900	5400	3600		80	72.6	8000	3000			
	60	55.5	30500	12600	10200		100	55.9	11800			100		67.5	8000					
103 Ft.	70	47.4	24200	9700	7500		173 Ft.	120	42.3	8200			253 Ft.	120	62.4	5900				
	80	38.0	19600	7500	5600			130	36.3	6800				50	80.0	10000	10000	9300		
	90	25.7	16200	5800	4100			140	29.1	5600				60	77.7	10000	7900	5500		
	113 Ft.	25	81.0	119700	43800			38600	183 Ft.	40	78.4	55300		21300	17800	80	73.1	7000		
		30	78.5	88300	34200			29700		50	74.9	38700	14800	11900	100	68.1	7000			
40		73.3	56200	22800	19200			60		71.2	29000	10500	8100	120	63.3	5600				
50		67.8	39800	16200	13400			80		63.5	17900	5400	3600	See Notes Page						
60		62.3	30100	12000	9600	100		55.9		11300										



NOTES

1. The rated loads as determined by boom length, radius and weight of load apply to this machine as originally manufactured and equipped and as mounted on a Lorain manufactured MC-8150, 10x4 carrier. **THEY ARE MAXIMUM** lifting capacities and comply with standards of the Power Crane & Shovel Association as issued by the U.S. Department of Commerce Commercial Standard CS90-58 and the SAE Crane Load Stability Test Code J765.
- 1a. Do not exceed the "over-the-rear" capacities when lifting over a corner.
- 1b. All lifting must be done with gantry erected.
- 1c. Maximum counterweight suitable for lifting crane service only. **OUTRIGGERS MUST BE FULLY EXTENDED.**
- 1d. Standard counterweight suitable for lifting crane, dragline and clam-shell service.
- 1e. The total weight of bucket plus load must not exceed the rated "without outriggers" lifting capacities up to a maximum of 15,000 lbs. for dragline service and 18,000 lbs. for clamshell service.
2. Load-handling devices are part of the load. For jib, see notes 4, 4a and 4b.
3. Maximum length of main boom 183 ft.
4. Jibs may be used straight or goosenecked. 30 ft. jib is two-piece and may be extended to 70 ft. with center sections. The following data apply:

Jib Lgth.	Radius	Max. Lgth. of Boom Incl. Jib		Maximum Lifting Capacity (Lbs.) Offset From Extended Centerline of Boom					Weight of Jib & Backstays
		Std. Cwt.	Max. Cwt.	0 Ft.	6 Ft.	12 Ft.	18 Ft.	24 Ft.	
30 Ft.	Up thru 70' Over 70'	213 ft.	213 ft.	30000 20000	30000 20000	30000 20000			1980 lbs.
40 Ft.	Up thru 70' Over 70'	223 ft.	223 ft.	22000 14000	22000 14000	22000 14000	16000 10000		2350 lbs.
50 Ft.	Up thru 70' Over 70'	233 ft.	233 ft.	15000 10000	15000 10000	15000 10000	14000 9000	12000 8000	2560 lbs.
60 Ft.	Up thru 70' Over 70'	243 ft.	243 ft.	12000 8000	12000 8000	11000 7500	10000 7000	9000 6000	2900 lbs.
70 Ft.	Up thru 70' Over 70'	253 ft.	253 ft.	10000 7000	9000 6500	8000 6000	7000 5500	6000 4500	3150 lbs.

- 4a. Capacities for jibs are the same as for the boom length which is equal to the length of main boom plus jib, but in no case may they exceed the capacities shown in note 4.

- 4b. With jib installed, lifting capacities over main boom head must be reduced as follows:

2070 lbs. for 30 ft. jib	3200 lbs. for 60 ft. jib
2500 lbs. for 40 ft. jib	3500 lbs. for 70 ft. jib
2770 lbs. for 50 ft. jib	

5. With gantry erected (25 ft. 0 in. overall height), the following maximum lengths may be carried* over the rear:

Standard counterweight
 103 ft. boom without jib
 93 ft. boom and 30 ft. jib
 83 ft. boom and 70 ft. jib
 Speed restricted to 5 MPH max.

Maximum counterweight
 153 ft. boom without jib
 133 ft. boom and 40 ft. jib
 123 ft. boom and 70 ft. jib

Speed restricted to low-low gear.

*For straight back and forward movement. Remove 10 ft. of boom from that specified for conditions which require maneuverability.

With gantry lowered (13 ft. 4½ in. overall height without jib, 19 ft. 0 in. overall height with jib), the following maximum lengths may be carried over the rear:

Standard counterweight
 93 ft. boom without jib
 93 ft. boom with 30 ft. jib
 83 ft. boom with 70 ft. jib
 Speed restricted to 5 MPH max.

Maximum counterweight
 93 ft. boom without jib
 93 ft. boom with 70 ft. jib
 Speed restricted to low-low gear.

6. With outriggers set and gantry erected, the following maximum boom lengths may be raised unassisted, from horizontal over the rear:

Standard counterweight
 183 ft. boom without jib
 163 ft. boom and 40 ft. jib
 153 ft. boom and 70 ft. jib

Maximum counterweight
 183 ft. boom without jib
 183 ft. boom and 70 ft. jib

- 6a. For boom and jib combinations longer than shown in Note 6 and up to 183 ft. boom and 70 ft. jib, rear auxiliary outriggers are required.
7. Minimum number of parts of hoist line to be determined by dividing the load to be lifted by 25,000 lbs. for 1 in. hoist cable with breaking strength of 44.9 tons.



Koehring
Lorain Division
Lorain, Ohio 44055



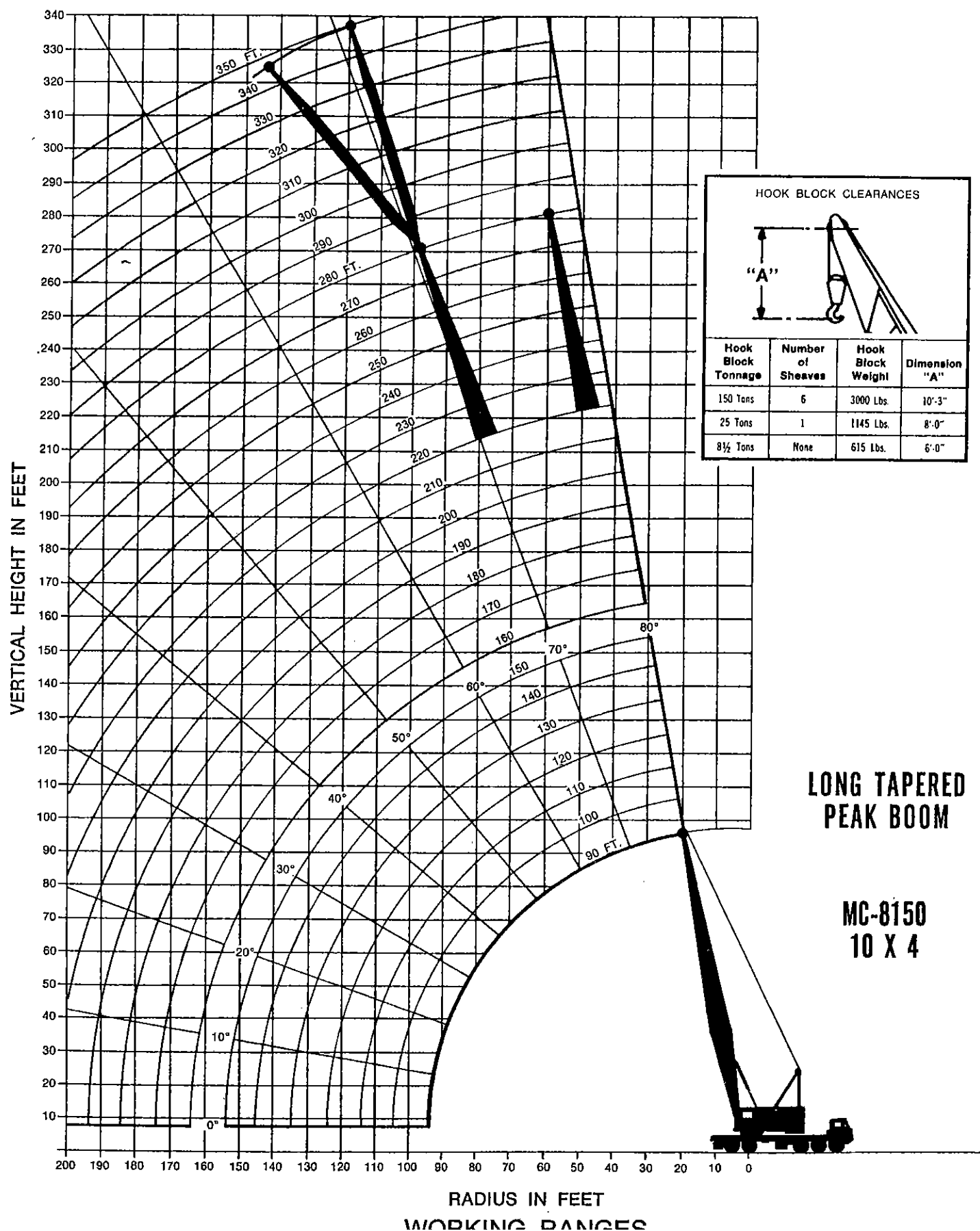
LORAIN

strong on performance

MC-8150

MOTO-CRANE[®]

LOAD RATINGS





CRANE LOAD RATINGS - POUNDS

MAXIMUM COUNTERWEIGHT (58,600 LBS.)

Boom Rad. Ft.	Boom Ang. Deg.	Boom Peak Height Ft.	With Outriggers	
			Over Rear	Over Side
90 Ft. Boom				
20	79.6	95.5	191600 *	191600 *
25	76.3	94.5	154900 *	154900 *
30	73.0	93.1	126800	126800
40	66.2	89.4	83100	83100
50	59.1	84.2	61100	61100
60	51.3	77.3	47800	47800
70	42.6	67.9	38900	38900
80	32.1	54.8	32500	32500
90	16.6	32.7	27600	27600
100 Ft. Boom				
25	77.7	104.7	154400 *	154400 *
30	74.8	103.5	126500	126500
40	68.7	100.2	82800	82800
50	62.5	95.7	60800	60800
60	55.8	89.7	47500	47500
70	48.5	81.9	38600	38600
80	40.3	71.7	32200	32200
90	30.4	57.6	27300	27300
100	15.7	34.1	23600	23600
110 Ft. Boom				
25	78.9	114.9	153600 *	153600 *
30	76.2	113.8	126300	126300
40	70.8	110.9	82500	82500
50	65.1	106.8	60500	60500
60	59.2	101.5	47200	47200
70	53.0	94.8	38300	38300
80	46.1	86.3	31800	31800
90	38.4	75.3	27000	27000
100	29.0	60.3	23300	23300
110	15.0	35.5	20300	20300
120 Ft. Boom				
30	77.4	124.1	126100	126100
40	72.4	121.4	82300	82300
50	67.3	117.7	60200	60200
60	62.0	113.0	46900	46900
70	56.5	107.1	38000	38000
80	50.5	99.7	31500	31500
90	44.0	90.4	26700	26700
100	36.7	78.7	22900	22900
110	27.7	62.8	19900	19900
120	14.4	36.8	17500	17500
130 Ft. Boom				
30	78.4	134.3	125400 *	125400 *
40	73.8	131.8	82000	82000
50	69.2	128.5	59900	59900
60	64.4	124.2	46600	46600
70	59.4	118.9	37700	37700
80	54.1	112.3	31200	31200
90	48.4	104.3	26400	26400
100	42.2	94.4	22600	22600
110	35.2	81.9	19600	19600
120	26.6	65.2	17200	17200
130	13.8	38.0	15100	15100
140 Ft. Boom				
35	77.1	143.5	99300	99300
40	75.0	142.2	81700	81700
50	70.7	139.1	59600	59600
60	66.3	135.2	46300	46300
70	61.8	130.3	37400	37400
80	57.0	124.4	30900	30900
90	52.0	117.3	26100	26100
100	46.6	108.7	22300	22300
110	40.6	98.2	19000	19000
120	33.9	85.0	16800	16800
130	25.6	67.5	14800	14800
140	13.3	39.2	13100	13100

Boom Rad. Ft.	Boom Ang. Deg.	Boom Peak Height Ft.	With Outriggers	
			Over Rear	Over Side
150 Ft. Boom				
35	78.0	153.7	99100	99100
40	76.0	152.6	81500	81500
50	72.0	149.7	59300	59300
60	68.0	146.1	46000	46000
70	63.8	141.6	37100	37100
80	59.4	136.2	30600	30600
90	54.9	129.7	25800	25800
100	50.1	122.0	22000	22000
110	44.9	112.9	19000	19000
120	39.2	101.8	16500	16500
130	32.7	88.0	14500	14500
140	24.7	69.7	12700	12700
150	12.8	40.3	11300	11300
160 Ft. Boom				
40	76.9	162.8	81200	81200
50	73.2	160.2	59000	59000
60	69.4	156.8	45700	45700
80	61.5	147.7	30300	30300
100	53.0	134.8	21700	21700
120	43.4	116.9	16200	16200
140	31.6	90.9	12400	12400
160	12.4	41.4	9700	9700
170 Ft. Boom				
40	77.7	173.1	80900	80900
50	74.2	170.6	58700	58700
60	70.7	167.4	45400	45400
80	63.4	158.9	30000	30000
100	55.5	147.1	21400	21400
120	46.9	131.0	15900	15900
140	36.7	108.7	12100	12100
160	23.2	74.0	9300	9300
170	12.1	42.5	8100	8000
180 Ft. Boom				
40	78.4	183.3	80600 *	80600 *
50	75.1	181.0	58400	58400
60	71.8	178.0	45100	45100
80	64.9	170.1	29700	29700
100	57.7	159.1	21000	21000
120	49.8	144.4	15600	15500
140	40.8	124.6	11800	11700
160	29.8	96.4	9000	9000
180	11.7	43.6	6900	6800
190 Ft. Boom				
40	79.0	193.5	76100 *	76100 *
50	75.9	191.3	58200	58200
60	72.8	188.5	44800	44800
80	66.3	181.0	29400	29400
100	59.6	170.8	20700	20700
120	52.3	157.3	15200	15200
140	44.2	139.4	11400	11400
160	34.7	115.1	8700	8600
180	21.9	78.0	6600	6500
190	11.4	44.6	5600	5500
200 Ft. Boom				
45	78.1	202.7	66600 *	66600 *
50	76.6	201.6	57900	57900
60	73.7	198.9	44500	44500
80	67.6	191.9	29100	29000
100	61.2	182.3	20400	20300
120	54.5	169.7	14900	14800
140	47.1	153.4	11100	11000
160	38.6	131.8	8300	8300
180	28.2	101.5	6200	6100
200	11.1	45.5	4600	4500

Boom Rad. Ft.	Boom Ang. Deg.	Boom Peak Height Ft.	With Outriggers	
			Over Rear	Over Side
210 Ft. Boom				
45	78.7	212.9	62800	62800
50	77.3	211.8	57600	57600
60	74.5	209.3	44200	44200
80	68.7	202.7	28800	28700
100	62.7	193.6	20100	20000
120	56.4	181.9	14600	14500
140	49.5	166.8	10800	10700
160	41.9	147.3	8000	7900
180	32.9	121.2	5900	5800
200	20.8	81.7	4200	4100
220 Ft. Boom				
50	77.9	222.1	56000 *	56000 *
60	75.2	219.7	43900	43900
80	69.7	213.4	28500	28400
100	64.1	204.8	19800	19700
120	58.1	193.8	14300	14100
140	51.7	179.7	10500	10300
160	44.7	161.9	7700	7500
180	36.8	138.7	5600	5400
200	26.9	106.4	3900	3700
230 Ft. Boom				
50	78.4	232.3	53100 *	53100 *
60	75.8	230.0	43400	43400
80	70.6	224.0	28100	28000
100	65.3	215.9	19400	19300
120	59.6	205.5	13900	13800
140	53.7	192.3	10100	10000
160	47.2	175.8	7300	7200
180	40.0	154.8	5200	5100
200	31.4	126.9	3500	3400
240 Ft. Boom				
50	78.9	242.5	50000 *	50000 *
60	76.4	240.3	43100 *	43100 *
80	71.5	234.6	27800	27700
100	66.4	226.9	19100	19000
120	61.0	217.0	13600	13400
140	55.4	204.6	9800	9600
160	49.4	189.2	7000	6800
180	42.7	169.9	4900	4700
250 Ft. Boom				
55	78.2	251.7	43100 *	43100 *
60	77.0	250.6	40300 *	40300 *
80	72.2	245.1	27500	27400
100	67.4	237.7	18800	18600
120	62.3	228.3	13200	13100
140	57.0	216.6	9400	9300
160	51.3	202.2	6700	6500
180	45.2	184.3	4500	4300
260 Ft. Boom				
55	78.6	261.9	40800 *	40800 *
60	77.5	260.8	38100 *	38100
80	72.9	255.6	27100	27100
100	68.3	248.5	18400	18300
120	63.4	239.6	12900	12800
140	58.4	228.4	9100	8900
160	53.1	214.8	6300	6100
180	47.3	198.1	4200	4000
270 Ft. Boom				
55	79.1	272.1	38500 *	38500 *
60	78.0	271.1	36000 *	36000 *
80	73.6	266.0	26800	26700
100	69.1	259.3	18100	18000
120	64.5	250.7	12600	12400
140	59.7	240.1	8800	8600
160	54.6	227.2	6000	5800
180	49.2	211.5	3900	3600

**CRANE LOAD RATINGS - POUNDS****MAXIMUM COUNTERWEIGHT (58,600 LBS.)****(Continued)**

Boom Rad. Ft.	Boom Ang. Deg.	Boom Peak Height Ft.	With Outriggers	
			Over Rear	Over Side
280 Ft. Boom				
60	78.4	281.3	33800 *	33800 *
80	74.2	276.4	26100 *	26100 *
100	69.9	269.9	17800	17600
120	65.5	261.7	12300	12100
140	60.9	251.6	8500	8200
160	56.1	239.3	5700	5400
180	51.0	224.6	3500	3300
Load Ratings Below Include Jib				
290 Ft. Boom				
60	78.8	291.5	30000 *	30000 *
80	74.8	286.3	20000 *	20000 *
100	70.6	280.6	17000 *	17000 *
120	66.4	272.7	12000	11700
140	62.0	263.0	8100	7900
160	57.4	251.3	5300	5100
300 Ft. Boom				
60	79.2	301.7	30000 *	30000 *
80	75.3	297.1	20000 *	20000 *
100	71.3	291.1	15400 *	15400 *
120	67.2	283.6	11600 *	11400
140	63.0	274.3	7800	7500
160	58.6	263.1	5000	4700
310 Ft. Boom				
60	79.5	311.9	28200 *	28200 *
80	75.8	307.5	19200 *	19200 *
100	71.9	301.7	14700 *	14700 *
120	68.0	294.4	10600 *	10600 *
140	63.9	285.5	7600 *	7200
160	59.7	274.7	4800	4400
320 Ft. Boom				
60	79.9	322.0	22000 *	22000 *
80	76.2	317.8	14000 *	14000 *
100	72.5	312.2	13200 *	13200 *
120	68.7	305.1	9100 *	9100 *
140	64.8	296.5	6500 *	6500 *
160	60.8	286.3	4100 *	4000
330 Ft. Boom				
60	80.2	332.2	15000 *	15000 *
80	76.6	328.1	10000 *	10000 *
100	73.0	322.7	10000 *	10000 *
120	69.4	315.8	8200 *	8200 *
140	65.6	307.6	5400 *	5400 *
160	61.7	297.7	3100 *	3100 *
340 Ft. Boom				
60	80.5	342.3	12000 *	12000 *
80	77.0	338.3	8000 *	8000 *
100	73.6	333.1	8000 *	8000 *
120	70.0	326.5	6900 *	6900 *
140	66.4	318.5	4000 *	4000 *
350 Ft. Boom				
60	80.8	352.5	10000 *	10000 *
80	77.4	348.6	7000 *	7000 *
100	74.0	343.5	7000 *	7000 *
110	72.3	340.5	7000 *	7000 *
120	70.6	337.1	5700 *	5700 *

CRANE LOAD RATINGS - POUNDS**STANDARD COUNTERWEIGHT (24,100 LBS.)**

Boom Rad. Ft.	Boom Ang. Deg.	Boom Peak Height Ft.	With Outriggers		Without Outriggers	
			Over Rear	Over Side	Over Rear	Over Side
90 Ft. Boom						
20	79.6	95.5	170200 *	170200 *	61200	55300
25	76.3	94.5	121400	121400	45800	40600
30	73.0	93.1	90100	90100	36200	31700
40	66.2	89.4	58000	58000	24800	21200
50	59.1	84.2	41700	41700	18300	15400
60	51.3	77.3	32000	32000	14000	11600
70	42.6	67.9	25600	25600	11100	9000
80	32.1	54.8	21100	21100	8900	7000
90	16.6	32.7	17700	17700	7200	5500
100 Ft. Boom						
25	77.7	104.7	121200	121200	45400	40300
30	74.8	103.5	88900	88900	35800	31300
40	68.7	100.2	57800	57800	24400	20900
50	62.5	95.7	41400	41400	17900	15000
60	55.8	89.7	31700	31700	13700	11200
70	48.5	81.9	25300	25300	10700	8600
80	40.3	71.7	20800	20800	8500	6700
90	30.4	57.6	17400	17400	6900	5200
100	15.7	34.1	14700	14700	5500	4000
110 Ft. Boom						
25	78.9	114.9	121000	121000	45100	39900
30	76.2	113.8	89700	89700	35500	31000
40	70.8	110.9	57500	57500	24100	20500
50	65.1	106.8	41100	41100	17500	14700
60	59.2	101.5	31400	31400	13300	10900
70	53.0	94.8	25000	25000	10400	8300
80	46.1	86.3	20500	20500	8200	6300
90	38.4	75.3	17100	17100	6500	4800
100	29.0	60.3	14400	14400	5200	3700
110	15.0	35.5	12300	12300	4100	
120 Ft. Boom						
30	77.4	124.1	89400	89400	35100	30600
40	72.4	121.4	57300	57300	23700	20200
50	67.3	117.7	40800	40800	17200	14300
60	62.0	113.0	31100	31100	13000	10500
70	56.5	107.1	24700	24700	10000	7900
80	50.5	99.7	20100	20100	7800	6000
90	44.0	90.4	16700	16700	6100	4500
100	36.7	78.7	14100	14100	4800	3300
110	27.7	62.8	12000	12000	3700	
120	14.4	36.8	10300	10300		
130 Ft. Boom						
30	78.4	134.3	89200	89200	34700	30300
40	73.8	131.8	57000	57000	23400	19900
50	69.2	128.5	40600	40600	16800	14000
60	64.4	124.2	30800	30800	12600	10200
70	59.4	118.9	24400	24400	9700	7600
80	54.1	112.3	19800	19800	7500	5600
90	48.4	104.3	16400	16400	5800	4100
100	42.2	94.4	13800	13800	4500	3000
110	35.2	81.9	11700	11700	3400	
120	26.6	65.2	9900	9900		
130	13.8	38.0	8500	8500		
140 Ft. Boom						
35	77.1	143.5	69900	69900	27800	23900
40	75.0	142.2	56800	56800	23000	19500
50	70.7	139.1	40300	40300	16500	13600
60	66.3	135.2	30500	30500	12300	9900
70	61.8	130.3	24100	24100	9300	7200
80	57.0	124.4	19500	19500	7100	5300
90	52.0	117.3	16100	16100	5400	3800
100	46.6	108.7	13500	13500	4100	
110	40.6	98.2	11200	11200		
120	33.9	85.0	9600	9600		
130	25.6	67.5	8200	8200		
140	13.3	39.2	7000	7000		



CRANE LOAD RATINGS - POUNDS

STANDARD COUNTERWEIGHT (24,100 LBS.)

(Continued)

Boom Rad. Ft.	Boom Ang. Deg.	Boom Peak Height Ft.	With Outriggers		Without Outriggers	
			Over Rear	Over Side	Over Rear	Over Side
150 Ft. Boom						
35	78.0	153.7	69700	69700	27400	23500
40	76.0	152.6	56500	56500	22700	19200
50	72.0	149.7	40000	40000	16100	13300
60	68.0	146.1	30300	30300	11900	9500
70	63.8	141.6	23800	23800	9000	6900
80	59.4	136.2	19200	19200	6800	4900
90	54.9	129.7	15800	15800	5100	3500
100	50.1	122.0	13200	13200	3800	
110	44.9	112.9	11000	11000		
120	39.2	101.8	9300	9300		
130	32.7	88.0	7900	7900		
140	24.7	69.7	6700	6700		
150	12.8	40.3	5600	5600		
160 Ft. Boom						
40	76.9	162.8	56300	56300	22300	18800
50	73.2	160.2	39700	39700	15800	12900
60	69.4	156.8	30000	30000	11600	9200
80	61.5	147.7	18900	18900	6400	4600
100	53.0	134.8	12800	12800	3400	
120	43.4	116.9	9000	9000		
140	31.6	90.9	6300	6300		
160	12.4	41.4	4400	4400		
170 Ft. Boom						
40	77.7	173.1	56000	56000	21900	18500
50	74.2	170.6	39500	39500	15400	12600
60	70.7	167.4	29700	29700	11200	8800
80	63.4	158.9	18600	18600	6100	4200
100	55.5	147.1	12500	12500	3100	
120	46.9	131.0	8700	8700		
140	36.7	108.7	6000	6000		
160	23.2	74.0	4100	4100		
170	12.1	42.5	3300	3300		
180 Ft. Boom						
40	78.4	183.3	55800	55800	21600	18100
50	75.1	181.0	39200	39200	15100	12200
60	71.8	178.0	29400	29400	10900	8500
80	64.9	170.1	18300	18300	5700	3900
100	57.7	159.1	12200	12200		
120	49.8	144.4	8300	8300		
140	40.8	124.6	5700	5700		
160	29.8	96.4	3700	3700		
190 Ft. Boom						
40	79.0	193.5	55500	55500	21100	17800
50	75.9	191.3	38900	38900	14700	11900
60	72.8	188.5	29100	29100	10500	8100
80	66.3	181.0	18000	18000	5400	3600
100	59.6	170.8	11900	11900		
120	52.3	157.3	8000	8000		
140	44.2	139.4	5300	5300		
160	34.7	115.1	3400	3400		
200 Ft. Boom						
45	78.1	202.7	45700	45700	17200	14100
50	76.6	201.6	38600	38600	14400	11600
60	73.7	198.9	28800	28800	10200	7800
80	67.6	191.9	17700	17700	5000	3200
100	61.2	182.3	11600	11600		
120	54.5	169.7	7700	7700		
140	47.1	153.4	5000	5000		

Boom Rad. Ft.	Boom Ang. Deg.	Boom Peak Height Ft.	With Outriggers		Without Outriggers	
			Over Rear	Over Side	Over Rear	Over Side
210 Ft. Boom						
45	78.7	212.9	45500	45500	16900	13800
50	77.3	211.8	38400	38400	14000	11200
60	74.5	209.3	28500	28500	9800	7400
80	68.7	202.7	17400	17400	4700	
100	62.7	193.6	11200	11200		
120	56.4	181.9	7400	7400		
140	49.5	166.8	4700	4700		
220 Ft. Boom						
50	77.9	222.1	38100	38100	13700	10900
60	75.2	219.7	28200	28200	9500	7100
80	69.7	213.4	17100	17100	4300	
100	64.1	204.8	10900	10900		
120	58.1	193.8	7000	7000		
140	51.7	179.7	4400	4400		
230 Ft. Boom						
50	78.4	232.3	37700	37700	13100	10300
60	75.8	230.0	27800	27800	8900	6600
80	70.6	224.0	16700	16700	3800	
100	65.3	215.9	10600	10600		
120	59.6	205.5	6700	6700		
140	53.7	192.3	4000	4000		
240 Ft. Boom						
50	78.9	242.5	37400	37400	12700	9900
60	76.4	240.3	27500	27500	8500	6200
80	71.5	234.6	16400	16400	3500	
100	66.4	226.9	10200	10200		
120	61.0	217.0	6400	6400		
140	55.4	204.6	3700	3700		
250 Ft. Boom						
55	78.2	251.7	31600	31600	10100	7500
60	77.0	250.6	27300	27300	8200	5900
80	72.2	245.1	16100	16100	3100	
100	67.4	237.7	9900	9900		
120	62.3	228.3	6000	6000		
140	57.0	216.6	3300	3300		
Load Ratings Below Include Jib						
260 Ft. Boom						
55	78.6	261.9	30000 *	30000 *	9700	7200
60	77.5	260.8	27000	27000	7800	5500
80	72.9	255.6	15800	15800		
100	68.3	248.5	9600	9600		
120	63.4	239.6	5700	5700		
270 Ft. Boom						
55	79.1	272.1	15000 *	15000 *	9400	6900
60	78.0	271.1	15000 *	15000 *	7500	5200
80	73.6	266.0	10000 *	10000 *		
100	69.1	259.3	9300	9300		
120	64.5	250.7	5400	5400		
280 Ft. Boom						
60	78.4	281.3	10000 *	10000 *	7100	4800
80	74.2	276.4	7000 *	7000 *		
100	69.9	269.9	7000 *	7000 *		
120	65.5	261.7	5100	5100		



NOTES

- Crane load ratings in pounds as determined by boom length, radius or boom angle apply to the MC-8150 Moto-Crane only as originally manufactured, equipped and mounted on a 10 x 4 Lorain MC-8150 carrier. **THEY ARE MAXIMUM CRANE LOAD RATINGS.**
- Operating radius is the horizontal distance from the axis of rotation before loading, to the center of the vertical hoist line or tackle with load applied. Crane load ratings are for machines with 24,100 lbs. of standard counterweight or 58,600 lbs. of maximum counterweight, and do not exceed 85% of tipping loads. Ratings identified with asterisk (*) are based on the machine's structural competence and not on the machine stability. Weight of hooks, hook blocks, slings and all other handling devices, except hoist rope shall be considered a part of the load. Crane load ratings with outriggers are based on outrigger fully extended and set to a distance of 11 ft. 0 in. from the longitudinal axis of the carrier to the outrigger float pivot connection and wheels within the boundary of the outriggers. Crane load ratings without outriggers depend on tire capacity and condition of tires inflated to 100 P.S.I.
- Crane load ratings are based on freely suspended loads with the machine leveled and standing on a firm, uniform supporting surface. Practical working loads depend on supporting surface, wind and other factors affecting stability, hazardous surroundings, experience of personnel and proper handling, all of which must be taken into account by the operator. Positioning or operation at radii and boom or jib lengths beyond the maximum and minimum shown, is not intended or approved.
- The operator and other personnel should fully read and acquaint themselves with Operator's Manual furnished by the manufacturer BEFORE operating this machine, and Rules for Safe Operation of equipment should be adhered to at all times.
- This crane and its load ratings are in accordance with Power Crane and Shovel Association Standards No. 1, SAE Crane Load Stability Test Code J-765a, SAE Method of Test for Crane Structure J-987 and Safety Code for Cranes, Derricks and Hoists, ANSI B30.5-1968.
- All ratings are with gantry in raised position.
- Do not exceed the "over-the-rear" capacities when lifting over a corner.
- Use blocking under front tires or front part of carrier frame if boom and/or load is to be moved forward of front outriggers.
- The crane, equipped with maximum counterweight, is suitable for lifting crane service only. **OUTRIGGERS MUST BE FULLY EXTENDED.**
- "Without Outriggers" crane load ratings are for over rear and over side as indicated. If loads are to be rotated over the corners of the vehicle, the outriggers should be extended to reduce tire and axle loadings.
- The crane, equipped with standard counterweight, is suitable for crane, dragline and clamshell service.
- The total weight of bucket plus load must not exceed the "Without Outriggers" crane load ratings up to a maximum of 15,000 lbs. for dragline service and 18,000 lbs. for clamshell service.
- Boom 190 ft. and over requires mast in addition to raised gantry. Mast with raised gantry may also be used with boom lengths under 190 ft.
- More than one part hoist line must be used on any boom when lifting radius is less than 20 ft.
- Intermediate suspension required for booms 240 ft. and over.
- Maximum length of boom (without jib).....280 ft.
- With gantry in raised position (25 ft. 0 in. overall height), the following maximum lengths may be carried * over rear without outriggers:

Standard Counterweight	Maximum Counterweight
120 ft. boom without jib	160 ft. boom without jib
100 ft. boom and 30 ft. jib	150 ft. boom and 30 ft. jib
90 ft. boom and 70 ft. jib	140 ft. boom and 50 ft. jib
	130 ft. boom and 70 ft. jib

Speed restricted to 5 MPH maximum Speed restricted to low-low gear
 * For straight back and forward movement, remove 10 ft. of boom from that specified for conditions which require maneuverability.

- With gantry in lowered position or gantry lowered and mast pinned to the base section (13 ft. 4½ in. overall height less jib) (19 ft. 0 in. with jib), the following maximum boom lengths may be carried over the rear without outriggers (Standard Counterweight or Maximum Counterweight):

120 ft. boom without jib
90 ft. boom and 70 ft. jib
Speed restricted to 5 MPH maximum (Standard Counterweight)
Speed restricted to low-low gear (Maximum Counterweight)

- With outriggers set and mast and gantry in raised position, the following maximum boom lengths may be raised unassisted, from the horizontal over the rear:

Standard Counterweight	Maximum Counterweight
190 ft. boom without jib	240 ft. boom without jib
170 ft. boom and 50 ft. jib	220 ft. boom and 30 ft. jib
160 ft. boom and 70 ft. jib	210 ft. boom and 60 ft. jib
	200 ft. boom and 70 ft. jib

- Rear auxiliary outriggers are required for boom and jib combinations longer than those shown in note 19.

Standard Counterweight	Maximum Counterweight
250 ft. boom without jib	280 ft. boom without jib
230 ft. boom and 30 ft. jib	270 ft. boom and 60 ft. jib
220 ft. boom and 50 ft. jib	260 ft. boom and 70 ft. jib
210 ft. boom and 70 ft. jib	

- Rear auxiliary outriggers and 16,000 lbs. bumper counterweight are required for boom and jib combinations longer than those shown in note 20.

Maximum Counterweight
280 ft. boom and 70 ft. jib
280 ft. boom and 60 ft. jib
270 ft. boom and 70 ft. jib

- When working with boom lengths that require auxiliary outriggers for erection, do not exceed the radii as shown on crane load rating chart.

- The rear hinged auxiliary outrigger beams are to be used only when raising or lowering long booms. They are never to be used or placed under load during hoisting operations.

- Hoist Cable Reeving:

Number of Parts of Hoist Lines	1	2	3	4	5	6	7	8
Maximum Loads (Lbs.)	25000	50000	75000	100000	125000	150000	175000	191600

Use 1 in. diameter hoist cable (6 x 25, IWRC) of 44.9 tons breaking strength.

- Crane load ratings are based on the use of dual pairs of 1¼ in. diameter swaged pendants (6 x 25, IWRC) of 87 tons breaking strength and 16 parts of ¾ in. diameter derricking cable (6 x 30G, IWRC) of 28.1 tons breaking strength.

NOTES FOR JIB APPLICATION

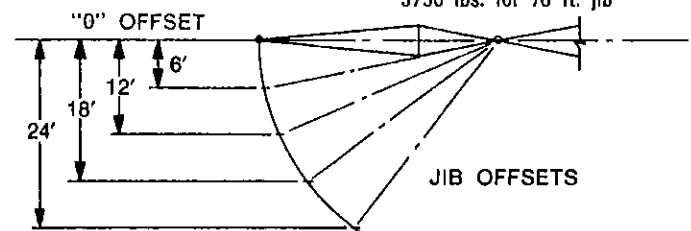
- Jibs may be used straight or offset. 30 ft. jib is of two-piece design and may be extended to 70 ft. with center sections. The following data apply:

Jib Lgh.	Radius	Max. Lgh. of Boom Incl. Jib		Jib Offset and Max. Load Ratings (Lbs.)					Weight of Jib and Backstays
		Std. Cwt.	Max. Cwt.	0 Ft.	6 Ft.	12 Ft.	18 Ft.	24 Ft.	
30 Ft.	Up thru 70' Over 70'	260 Ft.	310 Ft.	30000 20000	30000 20000	30000 20000			2230 Lbs.
40 Ft.	Up thru 70' Over 70'	260 Ft.	320 Ft.	22000 14000	22000 14000	22000 14000	16000 10000		2600 Lbs.
50 Ft.	Up thru 70' Over 70'	270 Ft.	330 Ft.	15000 10000	15000 10000	15000 10000	14000 9000	12000 8000	2810 Lbs.
60 Ft.	Up thru 70' Over 70'	270 Ft.	340 Ft.	12000 8000	12000 8000	11000 7500	10000 7000	9000 6000	3150 Lbs.
70 Ft.	Up thru 70' Over 70'	280 Ft.	350 Ft.	10000 7000	9000 6500	8000 6000	7000 5500	6000 4500	3400 Lbs.

- Load ratings for jibs are the same as for the boom length which is equal to the length of main boom plus jib but in no case may they exceed the capacities shown above.

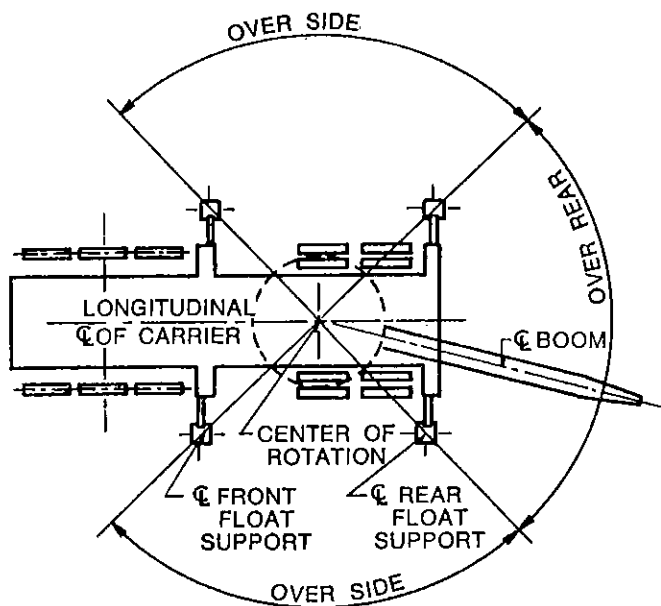
- With jib installed, load ratings over main boom head must be reduced as follows:

2320 lbs. for 30 ft. jib	3020 lbs. for 50 ft. jib
2750 lbs. for 40 ft. jib	3450 lbs. for 60 ft. jib
	3750 lbs. for 70 ft. jib

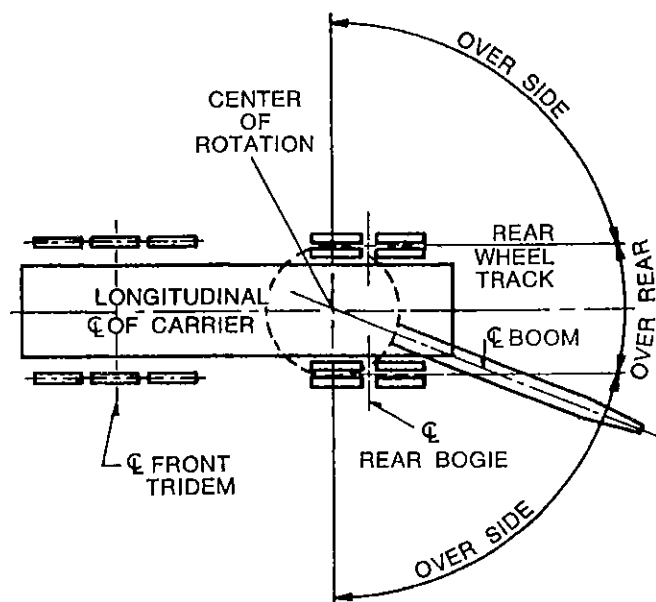




CRANE WORKING AREAS



Carrier With Outriggers



Carrier Without Outriggers

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.



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