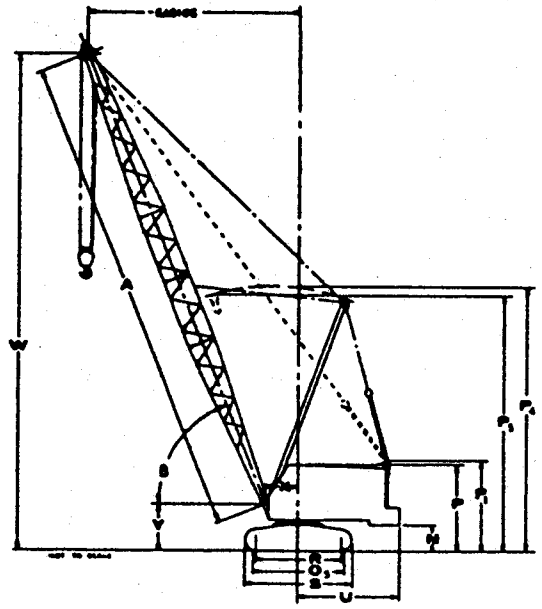
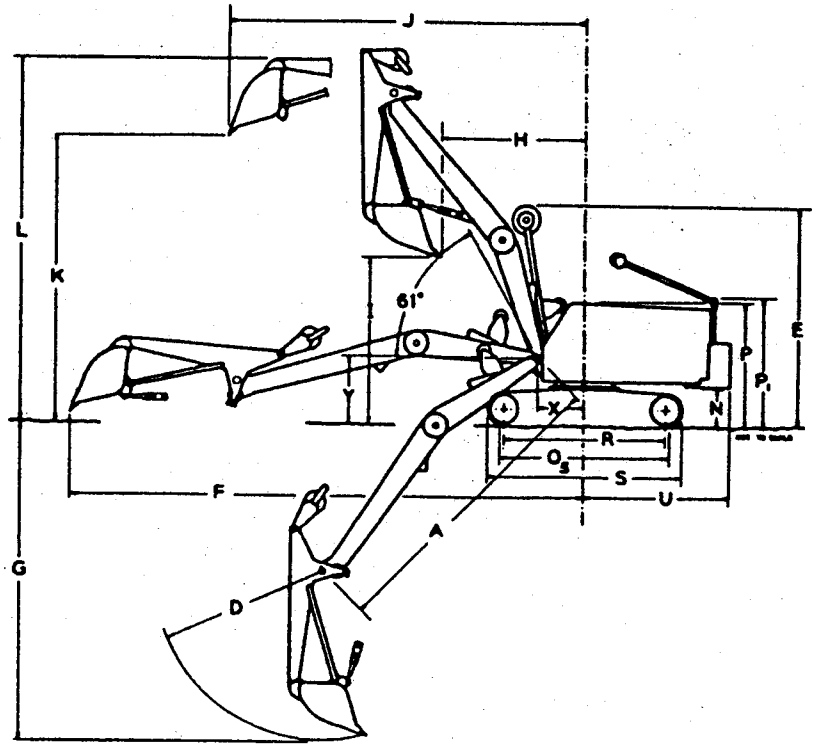
LS-418 Lifting Crane and Hoe Flysheet

103.5 TON CRAWLER MOUNTED CRANE (PCSA CLASS 15-536)

STANDARD LOWER 14'0" GAUGE X 22'4" LONG OVER-ALL

(Supersedes Flysheet CRF13010—3-68)





CRANE DIMENSIONS

Basic tubular "Hi-Lite" boom length	A	50' 0"
Boom angle	B	
Ground clearance under counterweight "A"	N	3'11"
Ground clearance under counterweight "AB"	N	3' 5"
Over-all height boom gantry vertical	P4	39' 1"
Over-all height boom gantry		

HOE WORKING RANGES

Bucket capacity, cubic yards		2½
Bucket cutting width (standard)		60"
Boom length	A	30' 0"
Average sweep radius	D	17' 0"
Height of hoe mast	E	23'10"
Maximum digging radius	F	51' 2"
Maximum digging depth①	G	34'10"

Over-all height boom gantry with 50' boom horizontal	P5	23' 7"
Tailswing of counterweight "A"	U	14' 6"
Tailswing of counterweight "AB"	U	15' 2"
GENERAL DIMENSIONS COMMON TO BOTH CRANE AND HOE		
Crawler ground bearing length	O5	20' 3"
Over-all cab height	P	12' 5"
Over-all gantry height	P1	13' 0"
Center to center of wheels	R	19' 1"
Over-all crawler length	S	22' 4"
Radius of boom hinge pin	X	4' 7"
Height of boom hinge pin	Y	6' 9"
Over-all width with 38" wide track shoes		17' 2"
Over-all cab width		11' 0"
Minimum ground clearance		1' 2"
Over-all cab height without side frames		11' 3"
Over-all shipping width without side frames		11' 0"

BRIEF SPECIFICATIONS

LIFTING CRANE:

Approximate working weight with standard engine, low gantry, 38" wide track shoes, 50' "Hi-Lite" boom, boom gantry, but no hook block:
With counterweight "A" ---------- 163,500 lbs.
With counterweight "AB" ---------- 202,500 lbs.
Swing speed ---------- 2.90 r.p.m.

Lagging	Line Pull	Line Speed
24⅛" front (hoist)	37,600 lbs.	@ 148 f.p.m.
24⅛" rear (hoist)	36,500 lbs.	@ 148 f.p.m.

CRAWLER:

38" wide track shoes standard. 44" wide track shoes optional at extra cost. Travel speed .98 m.p.h. Independent travel with choice of travel speed optional at extra cost.

Flysheet CRF 13016—3-70

Maximum digging depth①	G	34'10"
Radius beginning of dump	H	14' 4"
Ground clearance beginning of dump	I	16' 7"
Clearance radius end of dump	J	35' 9"
Ground clearance end of dump	K	28' 4"
Over-all height end of dump	L	36' 2"
Ground clearance, counterweight "A"	N	3'11"
Tailswing of counterweight "A"	U	14' 6"

① Dimension "G" shows maximum digging depth with 55° boom. The digging depth with 45° boom per U.S. Department of Commerce Standards is 31'5". The maximum "effective" digging depth will vary with the type of soil and excavation.

HOE LIFTING CAPACITIES

These are maximum lifting capacities (based on cable strength) for the hoe when used for laying pipe. Three part hoist line used.

BOOM RADIUS②	LIFTING CAPACITIES
20' to 25'	32,700 lbs.
20' to 30'	29,200 lbs.
20' to 34'	22,300 lbs.

② Radius is measured from machine centerline of rotation to centerline of boom peak shaft. Capacities are based upon the hoe arm being in a vertical position.

BRIEF SPECIFICATIONS

Approximate working weight with 38" wide track shoes, low gantry, counterweight "A" ---------- 173,970 lbs.
Swing speed ---------- 2.90 r.p.m.

Lagging	Line Pull	Line Speed
24⅜" inhaul (front)	37,600 lbs.	@ 148 f.p.m.
24⅜" hoist (rear)	36,500 lbs.	@ 148 f.p.m.

POWER UNITS:

Suitable for operation up to 4,000' above sea level. For operation at higher altitudes consult factory.
Standard—General Motors Series 6-71 (Model 6030-N) diesel engine with hydraulic coupling, 6 cylinder, 190 net h.p. at 2060 r.p.m. full load speed.
Optional at extra cost—Diesel—General Motors and Cummins with torque converter and Caterpillar with hydraulic coupling.

GENERAL INFORMATION ONLY

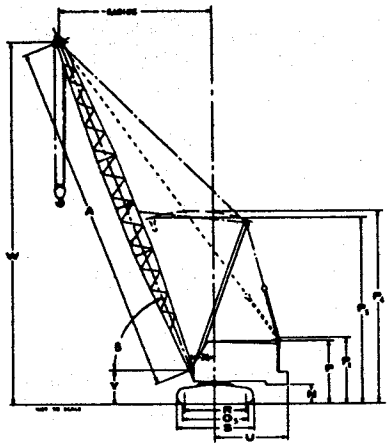
Printed in U.S.A.

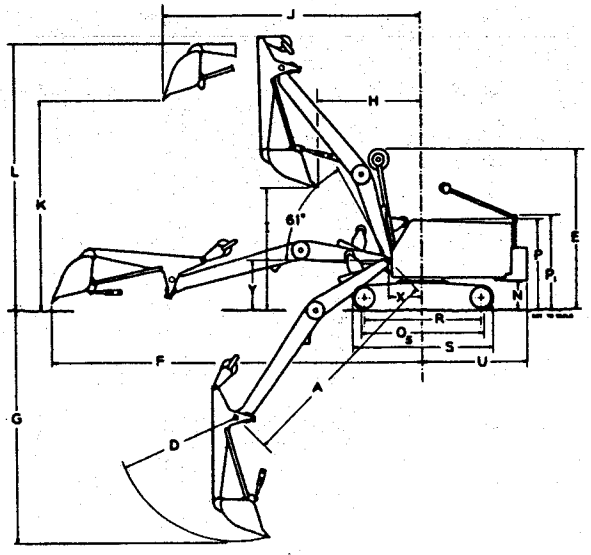
LS-418 Lifting Crane and Hoe Flysheet

103.5 TON CRAWLER MOUNTED CRANE (PCSA CLASS 15-536)

STANDARD LOWER 14'0" GAUGE X 22'4" LONG OVER-ALL

(Supersedes Flysheet CRF13010—3-68)





CRANE DIMENSIONS

Basic tubular "Hi-Lite" boom length	A	50' 0"
Boom angle	B	
Ground clearance under counterweight "A"	N	3'11"
Ground clearance under counterweight "AB"	N	3' 5"
Over-all height boom gantry vertical	P4	39' 1"
Over-all height boom gantry with 50' boom horizontal	P5	23' 7"
Tailswing of counterweight "A"	U	14' 6"
Tailswing of counterweight "AB"	U	15' 2"
GENERAL DIMENSIONS COMMON TO BOTH CRANE AND HOE		
Crawler ground bearing length	O5	20' 3"
Over-all cab height	P	12' 5"
Over-all gantry height	P1	13' 0"
Center to center of wheels	R	19' 1"
Over-all crawler length	S	22' 4"
Radius of boom hinge pin	X	4' 7"
Height of boom hinge pin	Y	6' 9"
Over-all width with 38" wide track shoes		17' 2"
Over-all cab width		11' 0"
Minimum ground clearance		1' 2"
Over-all cab height without side frames		11' 3"
Over-all shipping width without side frames		11' 0"

BRIEF SPECIFICATIONS

LIFTING CRANE:

Approximate working weight with standard engine, low gantry, 38" wide track shoes, 50' "Hi-Lite" boom, boom gantry, but no hook block:
With counterweight "A" ---------- 163,500 lbs.
With counterweight "AB" ---------- 202,500 lbs.

Swing speed ---------- 2.90 r.p.m.

Lagging	Line Pull	Line Speed
24⅜" front (hoist)	37,600 lbs.	@ 148 f.p.m.
24⅜" rear (hoist)	36,500 lbs.	@ 148 f.p.m.

CRAWLER:

38" wide track shoes standard. 44" wide track shoes optional at extra cost. Travel speed .98 m.p.h. Independent travel with choice of travel speed optional at extra cost.

HOE WORKING RANGES

Bucket capacity, cubic yards		2½
Bucket cutting width (standard)		60"
Boom length	A	30' 0"
Average sweep radius	D	17' 0"
Height of hoe mast	E	23'10"
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Maximum digging depth①	G	34'10"
Radius beginning of dump	H	14' 4"
Ground clearance beginning of dump	I	16' 7"
Clearance radius end of dump	J	35' 9"
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Over-all height end of dump	L	36' 2"
Ground clearance, counterweight "A"	N	3'11"
Tailswing of counterweight "A"	U	14' 6"

① Dimension "G" shows maximum digging depth with 55° boom. The digging depth with 45° boom per U.S. Department of Commerce Standards is 31'5". The maximum "effective" digging depth will vary with the type of soil and excavation.

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These are maximum lifting capacities (based on cable strength) for the hoe when used for laying pipe. Three part hoist line used.

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BRIEF SPECIFICATIONS

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Swing speed ---------- 2.90 r.p.m.

Lagging	Line Pull	Line Speed
24⅜" inhaul (front)	37,600 lbs.	@ 148 f.p.m.
24⅜" hoist (rear)	36,500 lbs.	@ 148 f.p.m.

POWER UNITS:

Suitable for operation up to 4,000' above sea level. For operation at higher altitudes consult factory.

Standard—General Motors Series 6-71 (Model 6030-N) diesel engine with hydraulic coupling, 6 cylinder, 190 net h.p. at 2060 r.p.m. full load speed.

Optional at extra cost—Diesel—General Motors and Cummins with torque converter and Caterpillar with hydraulic coupling.

GENERAL INFORMATION ONLY

Printed in U.S.A.

LS-418 Lifting Capacities ① With Tubular "Hi-Lite" Boom, 1¼" Diameter Extender Cables and Boom Gantry

STANDARD LOWER 14'0" GAUGE X 22'4" LONG OVERALL

FOR DRAGLINE, CLAMSHELL AND MAGNET CAPACITIES SEE NOTE ④

BOOM Length	BOOM Radius	BOOM Angle	W Boom Point Height	Ctwt. "A"	Ctwt. "AB"
50'	13'	80°	56' 0"	207,000*	207,000*
	14'	79°	55'10"	185,090*	207,000*
	15'	78°	55' 8"	160,470*	207,000*
	16'	77°	55' 6"	144,660	200,000*
	17'	76°	55' 3"	129,310	187,910
	18'	74°	54'10"	116,830	169,980
	19'	73°	54' 7"	106,490	155,050
	20'	72°	54' 4"	97,780	144,720
	25'	66°	52' 5"	69,010	102,660
	30'	59°	49'10"	52,910	79,140
	35'	53°	48' 5"	42,600	64,090
	40'	45°	42' 1"	35,420	53,620
	50'	25°	27' 8"	26,000	39,940
60'	14'	81°	66' 0"	185,090*	201,160*
	15'	80°	65'10"	160,470*	197,940*
	16'	79°	65' 8"	144,660	197,500*
	17'	78°	65' 5"	129,310	187,910
	18'	77°	65' 2"	116,830	169,980
	19'	76°	64'11"	106,490	155,050
	20'	75°	64' 9"	97,780	144,720
	25'	70°	63' 2"	69,010	102,660
	30'	65°	61' 1"	52,910	79,140
	35'	60°	58' 6"	42,600	64,090
	40'	54°	55' 2"	35,420	53,620
	50'	41°	45'11"	26,000	39,940
	60'	23°	29' 9"	20,410	31,690
70'	16'	81°	75'11"	144,660	179,500*
	17'	80°	75' 8"	129,310	179,000*
	18'	79°	75' 5"	116,830	169,980
	19'	78°	75' 3"	106,490	155,050
	20'	77°	75' 0"	97,780	144,720
	25'	73°	73' 8"	69,010	102,660
	30'	68°	71'11"	52,910	79,140
	35'	64°	69' 9"	42,600	64,090
	40'	60°	67' 1"	35,420	53,620
	50'	50°	60' 0"	26,000	39,940
	60'	38°	49' 6"	20,410	31,690
	70'	21°	31' 8"	16,510	26,000
80'	17'	81°	85' 9"	129,310	164,000*
	18'	80°	85' 6"	116,830	162,000*
	19'	79.5°	85' 5"	106,490	155,050
	20'	79°	85' 3"	97,780	144,720
	25'	75°	84' 1"	69,010	102,660
	30'	72°	82' 7"	52,910	79,140
	35'	68°	80' 9"	42,600	64,090
	40'	64°	78' 6"	35,420	53,620
	50'	55°	72' 7"	26,000	39,940
	60'	46°	64' 5"	20,410	31,690
	70'	35°	52' 9"	16,510	26,000
	80'	20°	33' 5"	13,620	21,800
90'	19'	81°	95' 8"	106,490	147,000*
	20'	80°	95' 5"	97,780	139,290*
	25'	77°	94' 5"	69,010	102,660
	30'	74°	93' 1"	52,910	79,140
	35'	70°	91' 5"	42,600	64,090
	40'	67°	89' 6"	35,420	53,620
	50'	60°	84' 5"	26,000	39,940
	60'	52°	77' 8"	20,410	31,690
	70'	43°	68' 7"	16,510	26,000
	80'	33°	55'10"	13,620	21,800
	90'	18°	35' 1"	11,370	18,560
100'	20'	81°	105' 7"	97,780	127,550*
	25'	78°	104' 8"	69,010	102,660
	30'	75°	103' 6"	52,910	79,140
	35'	72°	102' 0"	42,600	64,090
	40'	69°	100' 3"	35,420	53,620
	50'	63°	95'10"	26,000	39,940
	60'	56°	90' 0"	20,410	31,690
	70'	49°	82' 4"	16,500	25,980
	80'	41°	72' 5"	13,580	21,770
	90'	31°	58' 9"	11,350	18,540
	100'	17°	36' 8"	9,550	15,970

BOOM Length	BOOM Radius	BOOM Angle	W Boom Point Height	Ctwt. "A"	Ctwt. "AB"
110'	25'	79°	114'10"	69,010	102,660
	30'	77°	113' 9"	52,910	79,140
	40'	71°	110'11"	35,420	53,620
	50'	65°	106'11"	26,000	39,940
	60'	60°	101' 9"	20,410	31,670
	70'	54°	95' 2"	16,390	25,870
	80'	47°	86'10"	13,480	21,660
	90'	39°	76' 1"	11,260	18,460
	100'	30°	61' 6"	9,500	15,920
	110'	17°	38' 2"	8,040	13,830
120'	25'	80°	125' 0"	69,010	101,600*
	30'	78°	124' 0"	52,910	79,140
	40'	73°	121' 5"	35,420	53,620
	50'	68°	117'10"	26,000	39,940
	60'	63°	113' 2"	20,250	31,540
	70'	57°	107' 4"	16,260	25,740
	80'	51°	100' 1"	13,350	21,540
	90'	45°	91' 0"	11,140	18,330
	100'	37°	79' 6"	9,400	15,810
	110'	29°	64' 1"	7,970	13,760
	120'	16°	39' 7"	6,760	12,030
130'	25'	81°	135' 2"	69,010	93,280*
	30'	79°	134' 3"	52,910	79,140
	40'	74°	131'10"	35,390	53,620
	50'	70°	128' 7"	25,960	39,900
	60'	65°	124' 4"	20,110	31,400
	70'	60°	119' 1"	16,110	25,600
	80'	55°	112' 8"	13,210	21,390
	90'	49°	104' 9"	11,000	18,190
	100'	43°	95' 0"	9,260	15,670
	110'	36°	82'10"	7,840	13,640
	120'	27°	66' 7"	6,670	11,940
	130'	15°	41' 0"	5,640	10,490
140'	30'	80°	144' 7"	52,910	79,140
	40'	75°	142' 3"	35,260	53,460
	50'	71°	137' 4"	25,820	39,750
	60'	67°	135' 4"	19,950	31,240
	70'	62°	130' 6"	15,960	25,440
	80'	57°	124' 8"	13,050	21,230
	90'	52°	117' 8"	10,840	18,030
	100'	47°	109' 2"	9,100	15,520
	110'	41°	98'11"	7,700	13,490
	120'	35°	86' 0"	6,530	11,800
	130'	26°	68'11"	5,540	10,380
	140'	15°	42' 3"	4,600	9,140
150'	30'	80°	154' 7"	52,900	75,890*
	40'	76°	152' 6"	35,120	53,320
	50'	72°	149' 9"	25,600	39,600
	60'	68°	146' 2"	19,790	31,080
	70'	64°	141' 9"	15,790	25,280
	80'	60°	136' 5"	12,880	21,060
	90'	55°	130' 1"	10,670	17,870
	100'	51°	122' 6"	8,940	15,350
	110'	45°	113' 6"	7,530	13,320
	120'	40°	102' 7"	6,370	11,650
	130'	33°	89' 0"	5,390	10,230
	140'	26°	71' 3"	4,540	9,020
	150'	14°	43' 6"	3,780	7,950
160'	30'	81°	164' 9"	52,810	70,120*
	40'	77°	162' 9"	34,990	53,190
	50'	74°	160' 2"	25,520	39,460
	60'	70°	156'10"	19,640	30,930
	70'	66°	152' 9"	15,640	25,120
	80'	62°	147'10"	12,730	20,910
	90'	58°	142' 0"	10,520	17,710
	100'	53°	135' 2"	8,780	15,190
	110'	49°	127' 1"	7,370	13,170
	120'	44°	117' 7"	6,210	11,490
	130'	38°	106' 1"	5,240	10,080
	140'	32°	92' 0"	4,400	8,880
	150'	25°	73' 6"	3,670	7,830
	160'	14°	44' 9"	3,000	6,900

BOOM Length	BOOM Radius	BOOM Angle	W Boom Point Height	Ctwt. "A"	Ctwt. "AB"
170'	35'	80°	174' 0"	42,170	61,340*
	40'	78°	173' 0"	34,860	53,060
	50'	75°	170' 7"	25,380	39,310
	60'	71°	169' 6"	19,490	30,780
	70'	67°	163' 8"	15,480	24,970
	80'	64°	159' 1"	12,570	20,750
	90'	60°	153' 9"	10,360	17,550
	100'	56°	147' 5"	8,620	15,040
	110'	51°	140' 1"	7,220	13,010
	120'	47°	131' 7"	6,060	11,340
	130'	43°	121' 6"	5,090	9,930
	140'	37°	109' 6"	4,250	8,730
	150'	31°	94'10"	3,530	7,700
	160'	24°	75' 8"	2,890	6,790
	170'	13°	46' 0"	2,300	5,960
180'	35'	80°	184' 2"	42,040	55,650*
	40'	79°	183' 3"	34,720	51,970*
	50'	75°	180'11"	25,230	39,160
	60'	72°	178' 0"	19,340	30,630
	70'	69°	174' 5"	15,320	24,810
	80'	65°	170' 2"	12,410	20,590
	90'	62°	165' 2"	10,200	17,390
	100'	58°	159' 5"	8,460	14,880
	110'	54°	152' 8"	7,060	12,850
	120'	50°	144'10"	5,900	11,180
	130'	46°	135'10"	4,930	9,770
	140'	41°	125' 4"	4,100	8,580
	150'	36°	112'10"	3,380	7,550
	160'	30°	97' 7"	2,750	6,640
	170'	23°	77' 9"	2,180	5,840
	180'	13°	47' 1"	1,660	5,110
190'	35'	80°	194' 4"	41,900	49,950*
	40'	79°	193' 5"	34,580	46,080*
	50'	76°	191' 3"	25,080	39,010
	60'	73°	188' 7"	19,180	30,470
	70'	70°	185' 1"	15,160	24,650
	80'	67°	181' 2"	12,240	20,430
	90'	63°	176' 6"	10,030	17,220
	100'	60°	171' 0"	8,290	14,710
	110'	56°	164'10"	6,890	12,680
	120'	53°	157' 8"	5,730	11,010
	130'	49°	149' 5"	4,760	9,610
	140'	45°	140' 0"	3,940	8,420
	150'	40°	129' 0"	3,220	7,390
	160'	35°	116' 0"	2,590	6,490
	170'	30°	100' 2"	2,040	5,690
	180'	23°	79' 9"	1,540	4,980
	190'	13°	48' 3"	1,070	4,320
200'	40'	80°	203' 7"	34,430	45,200*
	50'	77°	201' 6"	24,920	35,830*
	60'	74°	198'11"	19,020	30,310
	70'	71°	195' 9"	14,990	24,480
	80'	68°	192' 0"	12,080	20,260
	90'	65°	187' 7"	9,860	17,050
	100'	61°	182' 6"	8,120	14,540
	110'	58°	176' 8"	6,720	12,510
	120'	55°	170' 1"	5,560	10,840
	130'	51°	162' 6"	4,590	9,440
	140'	47°	153'11"	3,770	8,240
	150'	43°	144' 1"	3,050	7,220
	160'	39°	132' 8"	2,430	6,320
	170'	34°	119' 2"	1,880	5,530
	180'	29°	102'10"	1,380	4,830
	190'	22°	81' 9"	——	4,190
	200'	12°	49' 4"	——	3,600

① Lifting capacities shown are in pounds and are not more than 75% of the minimum tipping loads with machine standing on firm level ground. A deduction must be made from the lifting capacities shown for weight of hook, hook block, sling, grapple, etc.

NOTE: Eight parts hoist line 1" diameter cable required for maximum lifts with "Hi-Lite" boom.

* Indicates these lifting capacities are based on factors other than those which would cause a tipping condition. See Note ①.

② If machine is equipped with optional 1½" diameter extender cables, all lifting capacities must be reduced by 400 pounds.

③ When using the boom gantry as a short boom for dismantling operations, maximum lifting capacity of the gantry is 47,000 pounds from 13' minimum radius to 20' maximum radius.

④ Dragline capacities are equal to the crane capacities shown for machines without boom gantry except limited to a maximum of 19,000 pounds. Clamshell and magnet capacities are equal to 90% of the crane capacities shown for machines without boom gantry except limited to a maximum of 22,500 pounds. The user must make allowances for soft or uneven supporting surfaces, rapid cycle operations, bucket suction or other unfavorable conditions which may require smaller buckets or magnets for most efficient operation. For dragline, clamshell, magnet or similar work, weight of bucket or magnet plus load should not exceed these capacities and boom length should not exceed 90 feet. Dragline operation with boom angle less than 35° is seldom advisable.

⑤ Lifting crane service for all boom lengths over 90 feet.

GENERAL INFORMATION ONLY

LS-418 Lifting Capacities① With Tubular "Hi-Lite" Boom, Counterweight "A", 1½" Diameter Extender Cables, But No Boom Gantry

STANDARD LOWER 14'0" GAUGE X 22'4" LONG OVERALL

FOR DRAGLINE, CLAMSHELL AND MAGNET CAPACITIES SEE NOTE ④

BOOM Length	BOOM Radius	BOOM Angle	W Boom Point Height	Lifting Crane
50'	12'	82°	56' 2"	206,280*
	15'	78°	55' 8"	155,610
	20'	72°	54' 4"	93,240
	25'	66°	52' 5"	66,170
	30'	59°	49'10"	51,040
	35'	53°	46' 5"	41,380
	40'	45°	42' 1"	34,600
	50'	25°	27' 8"	25,370
60'	15'	80°	65'10"	155,530
	20'	75°	64' 9"	93,100
	25'	70°	63' 2"	65,990
	30'	65°	61' 1"	50,840
	35'	60°	58' 6"	41,170
	40'	54°	55' 2"	34,450
	50'	41°	45'11"	25,370
	60'	23°	29' 9"	19,900
70'	15'	82°	76' 0"	155,470
	20'	77°	75' 0"	92,960
	25'	73°	73' 8"	65,820
	30'	68°	71'11"	50,650
	35'	64°	69' 9"	40,970
	40'	60°	67' 1"	34,240
	50'	50°	60' 0"	25,370
	60'	38°	49' 6"	19,900
	70'	21°	31' 8"	16,080

BOOM Length	BOOM Radius	BOOM Angle	W Boom Point Height	Lifting Crane
80'	20'	79°	85' 3"	92,830
	25'	75°	84' 1"	65,660
	30'	72°	82' 7"	50,470
	35'	68°	80' 9"	40,770
	40'	64°	78' 6"	34,040
	50'	55°	72' 7"	25,310
	60'	46°	64' 5"	19,890
	70'	35°	52' 9"	16,080
	80'	20°	33' 5"	13,250
90'	20'	80°	95' 5"	92,700
	25'	77°	94' 5"	65,490
	30'	74°	93' 1"	50,290
	35'	70°	91' 5"	40,570
	40'	67°	89' 6"	33,830
	50'	60°	84' 5"	25,090
	60'	52°	77' 8"	19,660
	70'	43°	68' 7"	15,970
	80'	33°	55'10"	13,250
	90'	18°	35' 1"	11,050
100'	20'	81°	105' 7"	92,570
	25'	78°	104' 8"	65,330
	30'	75°	103' 6"	50,100
	35'	72°	102' 0"	40,380
	40'	69°	100' 3"	33,630
	50'	63°	95'10"	24,880
	60'	56°	90' 0"	19,440
	70'	49°	82' 4"	15,740
	80'	41°	72' 5"	13,060
	90'	31°	58' 9"	11,020
	100'	17°	36' 8"	9,260

BOOM Length	BOOM Radius	BOOM Angle	W Boom Point Height	Lifting Crane
110'	25'	79°	114'10"	65,170
	30'	77°	113' 9"	49,920
	35'	74°	112' 5"	40,190
	40'	71°	110'11"	33,430
	50'	65°	106'11"	24,660
	60'	60°	101' 9"	19,220
	70'	54°	95' 2"	15,520
	80'	47°	86'10"	12,830
	90'	39°	76' 1"	10,790
	100'	30°	61' 6"	9,190
	110'	17°	38' 2"	7,780
120'	25'	80°	125' 0"	65,010
	30'	78°	124' 0"	49,750
	35'	75°	122'10"	40,000
	40'	73°	121' 5"	33,230
	50'	68°	117'10"	24,450
	60'	63°	113' 2"	19,010
	70'	57°	107' 4"	15,300
	80'	51°	100' 1"	12,610
	90'	45°	91' 0"	10,560
	100'	37°	79' 6"	8,960
	110'	29°	64' 1"	7,670
	120'	16°	39' 7"	6,490

LS-418 Lifting Capacities① With Angle Boom, Counterweight "A"

STANDARD LOWER 14'0" GAUGE X 22'4" LONG OVERALL

FOR LIFTING CRANE, DRAGLINE, CLAMSHELL AND MAGNET CAPACITIES SEE NOTES PAGE 2.

BOOM Length	BOOM Radius	BOOM Angle	Point Ht. W	With Boom Gantry 1¼" dia. Ext.	With No Boom Gantry 1½" dia. Ext.
50'	13'	80°	56' 0"	157,000*	138,790*
	14'	79°	55'10"	154,830*	134,770*
	15'	78°	55' 8"	152,040*	130,990*
	16'	77°	55' 6"	144,170*	127,410*
	17'	76°	55' 3"	128,920	124,340*
	18'	74°	54'10"	116,430	113,240
	19'	73°	54' 7"	106,080	103,260
	20'	72°	54' 4"	97,360	94,860
	25'	66°	52' 5"	68,550	67,120
	30'	59°	49'10"	52,430	51,610
	35'	53°	46' 5"	42,110	41,710
	40'	45°	42' 1"	34,920	34,840
	50'	25°	27' 8"	25,490	25,490
60'	14'	81°	66' 0"	139,190*	126,040*
	15'	80°	65'10"	137,090*	122,520*
	16'	79°	65' 8"	135,090*	119,850*
	17'	78°	65' 5"	128,920	115,360*
	18'	77°	65' 2"	116,430	112,480*
	19'	76°	64'11"	106,080	103,080
	20'	75°	64' 9"	97,360	94,660
	25'	70°	63' 2"	68,550	66,870
	30'	65°	61' 1"	52,430	51,340
	35'	60°	58' 6"	42,110	41,420
	40'	54°	55' 2"	34,920	34,540
	50'	41°	45'11"	25,490	25,490
	60'	23°	29' 9"	19,810	19,810
70'	16'	81°	75'11"	123,730*	110,490*
	17'	80°	75' 8"	122,190*	108,290*
	18'	79°	75' 5"	116,430	105,610*
	19'	78°	75' 3"	106,080	102,910
	20'	77°	75' 0"	97,360	94,470
	25'	73°	73' 8"	68,550	66,640
	30'	68°	71'11"	52,430	51,080
	35'	64°	69' 9"	42,110	41,140
	40'	60°	67' 1"	34,920	34,250
	50'	50°	60' 0"	25,490	25,300
	60'	38°	49' 6"	19,810	19,750
	70'	21°	31' 8"	15,830	15,830
80'	17'	81°	85' 9"	110,740*	101,340*
	18'	80°	85' 6"	109,390*	99,140*
	19'	79.5°	85' 5"	106,080	97,060*
	20'	79°	85' 3"	97,360	94,290
	25'	75°	84' 1"	68,550	66,400
	30'	72°	82' 7"	52,430	50,820
	35'	68°	80' 9"	42,110	40,860
	40'	64°	78' 6"	34,920	33,960
	50'	55°	72' 7"	25,490	25,000
	60'	46°	64' 5"	19,810	19,430
	70'	35°	52' 9"	15,830	15,640
	80'	20°	33' 5"	12,850	12,850

BOOM Length	BOOM Radius	BOOM Angle	Point Ht. W	With Boom Gantry 1¼" dia. Ext.	With No Boom Gantry 1½" dia. Ext.
90'	19'	81°	95' 8"	99,600*	90,850*
	20'	80°	95' 5"	97,360	89,320*
	25'	77°	94' 5"	68,550	66,180
	30'	74°	93' 1"	52,430	50,560
	35'	70°	91' 5"	42,110	40,590
	40'	67°	89' 6"	34,920	33,670
	50'	60°	84' 5"	25,490	24,690
	60'	52°	77' 8"	19,730	19,120
	70'	43°	68' 7"	15,730	15,330
	80'	33°	55'10"	12,800	12,570
	90'	18°	35' 1"	10,520	10,480
100'	20'	81°	105' 7"	90,530*	81,870*
	25'	78°	104' 8"	68,550	65,950
	30'	75°	103' 6"	52,430	50,300
	35'	72°	102' 0"	42,080	40,310
	40'	69°	100' 3"	34,830	33,390
	50'	63°	95'10"	25,420	24,390
	60'	56°	90' 0"	19,570	18,810
	70'	49°	82' 4"	15,570	15,010
	80'	41°	72' 5"	12,650	12,250
	90'	31°	58' 9"	10,420	10,160
	100'	17°	36' 8"	8,610	8,280
110'	25'	79°	114'10"	68,550	65,720
	30'	77°	113' 9"	52,370	50,050
	35'	74°	112' 5"	41,920	40,050
	40'	71°	110'11"	34,660	33,100
	50'	65°	106'11"	25,240	24,100
	60'	60°	101' 9"	19,380	18,510
	70'	54°	95' 2"	15,380	14,700
	80'	47°	86'10"	12,470	11,930
	90'	39°	76' 1"	10,250	9,840
	100'	30°	61' 6"	8,480	8,190
	110'	17°	38' 2"	7,020	6,220
	25'	80°	125' 0"	68,550	—
	30'	78°	124' 0"	52,220	—
	35'	75°	122'10"	41,740	—
	40'	73°	121' 5"	34,470	—
	50'	68°	117'10"	25,040	—
120'	60'	63°	113' 2"	19,170	—
	70'	57°	107' 4"	15,170	—
	80'	51°	100' 1"	12,260	—
	90'	45°	91' 0"	10,040	—
	100'	37°	79' 6"	8,290	—
	110'	29°	64' 1"	6,860	—
	120'	16°	39' 7"	5,650	—

BOOM Length	BOOM Radius	BOOM Angle	Point Ht. W	With Boom Gantry 1¼" dia. Ext.	With No Boom Gantry 1½" dia. Ext.
130'	25'	81°	135' 2"	65,310*	—
	30'	79°	134' 2"	52,050	—
	35'	77°	133' 2"	41,560	—
	40'	74°	131'10"	34,270	—
	50'	70°	128' 7"	24,820	—
	60'	65°	124' 4"	18,950	—
	70'	60°	119' 1"	14,940	—
	80'	55°	112' 8"	12,030	—
	90'	49°	104' 9"	9,820	—
	100'	43°	95' 0"	8,070	—
	110'	36°	82'10"	6,660	—
	120'	27°	66' 7"	5,470	—
	130'	15°	41' 0"	4,450	—
140'	30'	80°	144' 7"	51,870	—
	35'	77°	143' 5"	41,360	—
	40'	75°	142' 3"	34,060	—
	50'	71°	137' 4"	24,590	—
	60'	67°	135' 4"	18,710	—
	70'	62°	130' 6"	14,710	—
	80'	57°	124' 8"	11,790	—
	90'	52°	117' 8"	9,580	—
	100'	47°	109' 2"	7,840	—
	110'	41°	98'11"	6,420	—
	120'	35°	86' 0"	5,250	—
	130'	26°	68'11"	4,260	—
	140'	15°	42' 3"	3,380	—
150'	30'	80°	154' 7"	50,110*	—
	35'	78°	153' 8"	41,150	—
	40'	76°	152' 6"	33,840	—
	50'	72°	149' 9"	24,360	—
	60'	68°	146' 2"	18,470	—
	70'	64°	141' 9"	14,460	—
	80'	60°	136' 5"	11,540	—
	90'	55°	130' 1"	9,330	—
	100'	51°	122' 6"	7,590	—
	110'	45°	113' 6"	6,180	—
	120'	40°	102' 7"	5,010	—
	130'	33°	89' 0"	4,030	—
	140'	26°	71' 3"	3,180	—
	150'	14°	43' 6"	2,420	—

GENERAL INFORMATION ONLY

MAXIMUM BOOM LENGTHS MACHINE WILL HANDLE WITHOUT ASSISTANCE⑤	"HI-LITE" BOOM	
	Ctwt. "A"	Ctwt. "AB"
Machine will pick off ground over ends	200′	200′
Machine will pick off ground over sides	180′	200′
Machine will pick off ground over ends	180′ + 30′ jib	200′ + 60′ jib
Machine will pick off ground over ends	170′ + 60′ jib	
Machine will pick off ground over sides	150′ + 30′ jib	200′ + 30′ jib
Machine will pick off ground over sides	140′ + 60′ jib	190′ + 60′ jib
	ANGLE BOOM*	
Machine will pick off ground over ends	150′	———
Machine will pick off ground over sides	150′	———
Machine will pick off ground over ends	150′ + 40′ jib	———
Machine will pick off ground over sides	140′ + 40′ jib	———

⑤ Equipped with boom gantry and 1¼" diameter extender cables.

MAXIMUM BOOM LENGTHS FOR SAFE TRAVEL (BOOM HORIZONTAL)⑯	"HI-LITE" BOOM	
	Ctwt. "A"	Ctwt. "AB"
Boom over ends machine will travel with	160′	200′
Boom over sides machine will travel with	140′	190′
Boom over ends machine will travel with	130′ + 45′ jib	180′ + 30′ jib
Boom over ends machine will travel with	120′ + 60′ jib	170′ + 60′ jib
Boom over sides machine will travel with	110′ + 30′ jib	160′ + 30′ jib
Boom over sides machine will travel with	100′ + 60′ jib	140′ + 60′ jib
	ANGLE BOOM*	
Boom over ends machine will travel with	150″	———
Boom over sides machine will travel with	130′	———
Boom over ends machine will travel with	130′ + 20′ jib	———
Boom over sides machine will travel with	110′ + 30′ jib	———

*Counterweight "AB" is not available with Angle Boom.

⑯ Equipped with boom gantry, 1¼" diameter extender cables and hook blocks on both main hoist line and jib whipline capable of handling maximum machine capacity.

WEIGHT DEDUCTIONS FOR TRANSPORTING

Both side frames with standard 38" wide track shoes	46,390 lbs.
Both side frames with optional 44" wide track shoes	47,590 lbs.
Counterweight "A"	24,000 lbs.
Counterweight "AB"	63,000 lbs.
50′ angle lifting crane boom and extender cables	6,470 lbs.
50′ angle clamshell or dragline boom and extender cables	6,190 lbs.
50′"Hi-Lite" lifting crane boom and extender cables	5,200 lbs.
Boom gantry and boom hoist bridle	4,660 lbs.
Hoe attachment and standard bucket	23,230 lbs.

NOTE: See price list for weights of other optional equipment.

fmc CORPORATION

Link-Belt Speeder

DIVISION OF FMC CORPORATION

Cedar Rapids, Iowa • Woodstock, Ontario, Canada • Queretaro, Mexico • Milan, Italy

LINK-BELT SPEEDER

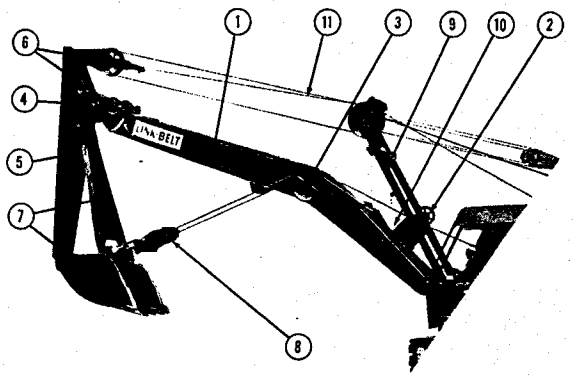
CONFIDENTIAL DETAIL SPECIFICATIONS

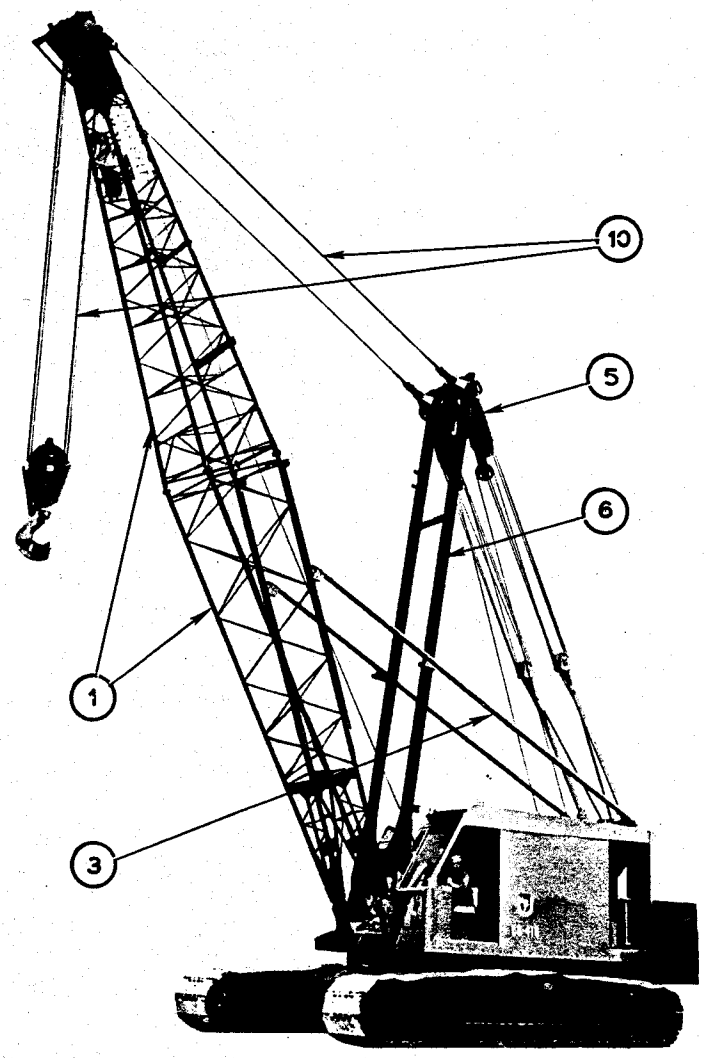
(Supersedes Specifications CRS13002-1-65)

LS-418

FRONT END ATTACHMENTS

These illustrations serve as an index to the attachments described in these specifications. Numerals shown indicate paragraph number.





LINK-BELT SPEEDER

DIVISION OF FMC CORPORATION

Cedar Rapids, Iowa • Woodstock, Ontario, Canada • Queretaro, Mexico • Milan, Italy

Specifications CRS 13012-8-68

Printed in U.S.A.

HOE ATTACHMENT

1. **BOOM**—All welded, stress relieved, box section of alloy steel channels and main plates, gooseneck design. 30′ from center of boom foot pin to center of boom peak shaft. Boom oscillates on bronze bushings in the boom foot.
   Boom Foot Pins—Steel, heat treated, 4″ diameter.
2. **INHAUL CABLE FAIRLEAD**—All welded steel bracket, bolted to top right side of boom, forward of boom foot.
   Sheaves—Cast steel, mounted on bronze bushings. Upper sheave is 14⅛″ root diameter. Lower sheave is 17⅛″ root diameter.
   Sheave Pins—Steel. Upper pin is 2½″ diameter. Lower pin is 3″ diameter.
3. **INHAUL CABLE SHEAVES ON BOOM**—Two, cast steel, 24″ root diameter, mounted on bronze bushings.
   Shaft—Steel, 4¾″ diameter, welded integral with boom.
4. **BOOM PEAK SHAFT FOR ARM**—Steel, heat treated, 5″ diameter, oscillates on steel, heat treated bushings in boom. Shaft floats and is retained by end caps bolted to arm hubs.
5. **ARM**—All welded box section of steel plates, 12′ from center of bucket connection to center of boom head shaft connection. Mounted on bronze bushings.
6. **ARM MACHINERY**—
   Deflector Sheaves—Two, cast iron, 13″ root diameter, mounted on bronze bushings.
   Deflector Sheave Pins—Steel, 2-15/16″ diameter.
   Hoist Padlock—All welded, steel plate construction, mounted on bronze bushings.
   Hoist Padlock Pin—Steel, heat treated, 3″ diameter.
   Hoist Padlock Sheave—Cast steel, 21⅛″ root diameter, mounted on bronze bushing.
   Hoist Padlock Sheave Pin—Steel, heat treated, 3-15/16″ diameter.
   Hoist Line Dead End Link—All welded, steel plate construction, mounted on hoist padlock sheave pin.
7. **BUCKET AND CONNECTIONS**—Esco 2½ cubic yard, 55″ cutting width without side cutters, 60″ cutting width with side cutters. Five replaceable teeth. Two lugs at rear connected to arm with a steel pin, 3″ diameter. Two holes in each lug allow for bucket pitch adjustments.
   Pitch Brace—All welded, box type construction of steel plates. Secured to arm with a steel pin, 3″ diameter and to bucket with two steel pins, 2½″ diameter.
8. **BUCKET BAIL**—Horizontal sheave type of welded plate construction with sheave completely enclosed.
   Sheave—Cast steel, 24″ root diameter, mounted on bronze bushing and protected from dirt by grease seals.
   Sheave Pin—Steel, heat treated, 4″ diameter.
9. **MAST**—15′ long from center of peak shaft to center of foot pin. Main members are 6″ extra heavy pipe with a steel plate, box section cross tie, pin connected to foot of boom with steel pins, 3″ diameter. May be used as a short boom for dismantling.
   Head Shaft—Steel, heat treated, 5″ diameter.
   Sheaves for Three Part Hoist—Two, cast steel, 24″ root diameter, mounted on bronze bushings.
   Sheaves for Six Part Boom Hoist—Four, ductile iron, heat treated, 12″ root diameter, mounted on bronze bushings.
   Hoist Line Deflector Roller—Steel, heat treated, 6″ diameter, mounted on bronze bushings on a steel pin, 2″ diameter.
10. **MAST BACKSTOP**—Cable type.
11. **CABLES**—

Mast—6 part line, ¾″ diameter, Type D	165′
Hoist—3 part line, 1″ diameter, Type S	175′
Inhaul—2 part line, 1⅛″ diameter, Type S	130′

Type D—6 x 25 (6 x 19 class) filler wire, improved plow steel, preformed, independent wire rope center, right lay, lang lay.

Type S—6 x 36 (6 x 37 class), filler wire, extra high tensile strength steel, preformed, independent wire rope center, right lay, lang lay.

CRANE, CLAMSHELL AND DRAGLINE ATTACHMENTS

1. **TUBULAR "HI-LITE" BOOM** — Two piece 50′ all welded box lattice design with 25′ upper and lower sections, 60″ wide and 54″ deep, center to center of chords at the connections. Chords are of heat treated, alloy steel, 3⅝″ outside diameter tubing with precision machined bracing of steel round tubing, fully coped to fit the chords. Boom feet are 2¾″ wide on 54½″ centers with case hardened steel bushings.
   Boom Foot Pins — Steel, heat treated, 4″ diameter.
   Head Shaft — Steel, heat treated, 4¾″ diameter, fixed.
   Head Machinery — Four sheaves, cast steel, 21″ root diameter, mounted on roller bearing outer race assemblies.
   Upper Sheave Guard — Steel plate and pipe construction.
   Lower Sheave Guard — Roller type, with 2½″ diameter heat treated steel rollers mounted on ball bearings in welded steel bracket.
   Connections — In-line pin connections to permit easy removal or addition of sections.
2. **EXTENSIONS** — Available in 20′ and 30′ lengths. Same construction as main boom.
3. **BOOM BACKSTOPS** — Dual, tubular, retractable type with cast steel spring cushioned bumpers. Main members are 4″ standard pipe. A visual warning device is also provided to warn operator when boom nears minimum radius.
4. **JIB BOOM** — Two piece 30′ all welded box lattice design with 15′ upper and lower sections, 36″ wide and 30″ deep, center to center of chords at the connections. Chords are of heat treated, alloy steel 2¼″ outside diameter tubing with all bracing of steel round tubing. 15′ extensions, of same construction, are available to make 45′ to 60′ jibs.
   Connections — In-line pin connections to permit easy removal or addition of sections.
   Jib Strut — 13′ 6″ high, mounted on jib base section. Two deflector sheaves for the whipline are mounted in the framework of the strut. Jib guy cable dead ends on each side of jib boom peak and passes over an equalizer sheave on jib strut. Boom guy cable dead ends on each side of boom upper section and passes over an equalizer sheave on jib strut.
   Deflector Sheaves — Two, ductile iron, heat treated, mounted on roller bearing outer race assemblies. Upper sheave — 11-1/16″ root diameter. Lower sheave — 15⅞″ root diameter.

Equalizer Sheaves — Two, ductile iron, heat treated, 8" root diameter, mounted on bronze bushings.

Peak Sheave — Ductile iron, heat treated, 15⅞" root diameter, mounted on two roller bearing outer race assemblies.

Peak Shaft — Steel, heat treated, 2½" diameter. Jib guy cable anchors are suspended from the shaft. Cable anchor is provided at peak of jib for two part whipline.

5. **BOOM HOIST BRIDLE** — Serves as a connection between boom gantry and boom hoist lines. Extender cables are pinned to upper end of boom gantry. Two types of adapter links are available to permit the use of either 1¼" diameter or 1½" diameter extender cables. Consists of two fabricated frames, one attached to each main member of gantry, having eight ductile iron, heat treated, 12" root diameter sheaves, mounted on bronze bushings for fourteen part boom hoist.

6. **BOOM GANTRY** — Standard with lifting crane attachment. Required in conjunction with counterweight "B" for maximum lifting crane service throughout entire range of boom lengths and is required to provide more favorable angle of support for all "Hi-Lite" boom lengths exceeding 120'. In addition, mid-point suspension cables are required to support the center of all "Hi-Lite" booms 160' or longer at initial lift off ground. Dual tubular design, of all welded steel pipe and plate construction, 30' long from center of foot pin to center of head shaft. To enable gantry to be used as a short boom for dismantling, two auxiliary hoist sheaves are provided for four part hoist line reeving. See paragraph on main extender cables when boom must be carried where overhead clearance is restricted.

Auxiliary Hoist Sheaves — Cast iron, 13" root diameter, mounted on bronze bushings.

Gantry Backstop — Positive type, incorporated in boom backstops. Functions only when gantry is used as a boom.

7. **FAIRLEADER** — Full revolving type, cast steel sheave bracket rotating on tapered roller bearings in a cast steel housing, mounted on extended boom foot pins and supported by a strut attached to revolving frame.

Sheaves — Ductile iron, heat treated, 17⅞" root diameter, mounted on tapered roller bearings.

Guide Rollers — Steel tubing, heat treated, 3½" diameter, mounted on ball bearings.

8. **TAGLINE WINDER** — Spring wound drum type, mounted on lower section of crane boom.
Rud-o-Matic Model 1248 for booms up to 80' long with buckets up to four cubic yards.
Rud-o-Matic Model 1248 Plus for booms 80' to 100' long with buckets up to two cubic yards.
Rud-o-Matic Model 1848 Plus for booms over 80' long with buckets up to five cubic yards.

9. **MISCELLANEOUS EQUIPMENT — Optional extra except as noted.**

Spreader Bar — Standard — On all "Hi-Lite" booms over 50' long. All welded steel construction, arched to clear hoist line. Installed at lower end of basic extenders.

Boomhoist Limiting Device — Standard with all crane boom attachments. Includes a device which, when it comes in contact with the boom, trips a switch and deactivates an electrically energized solenoid valve located in the hydraulic boom hoist clutch circuit. The deactivated solenoid valve releases the boom hoist clutch and a spring automatically applies the boom hoist brake. In normal operation, the boom must be lowered before it can be hoisted again. After, solenoid valve is deactivated, an emergency by-pass switch is provided for the purpose of hoisting boom to release the safety pawl in the event load is supported by safety pawl.

Hoist Line Deflector Rollers — Required to deflect hoist line and third drum line over top of boom. Steel tubing, heat treated, 3" diameter, mounted in self-aligning, ball bearing pillow blocks. One supplied as standard with all boom lengths.

Requirements — When using front drum for crane hoist line —
For boom lengths from 100' to 200' — one additional required.
For boom lengths from 130' to 160' — two additional required.
For boom lengths from 170' to 180' — three additional required.
For boom lengths from 190' to 200' — four additional required.

Crane Boom Angle Indicator — Mounted near base of boom on left side of boom. It is in plain view of the operator without obstructing his vision.

10. **CABLES —**

Boom Hoist — Fourteen part line, ¾" type G ..... 510'

	Parts of Line	Cable Size (Inches)	Type Cable	Boom Lengths				
				50'	60'	70'	80'	90'
Dragline Hoist Inhaul	 1 1	 ⅞ 1⅛	 D G	 130' 75'	 150' 85'	 170' 95'	 190' 105'	 210' 115'
Clamshell Holding Closing	 1 1	 ⅞ ⅞	 M M	 130' 180'	 150' 200'	 170' 220'	 190' 240'	 210' 260'
Tagline	1	5/16 or 3/8	B	Furnished with Rud-o-Matic Tagline Winder				

CRANE HOIST CABLE REQUIREMENTS

Cable Dia.	Parts of Hoist Line	Required Line Pull Off Drum	**Maximum Load	Max. Boom Length Based On 24⅜ Lag. Dia.
¾"	4	16,800#	62,300#	200'
⅞"	4	22,700#	84,200#	200'
1"	4	29,600#	109,800#	200'
¾"	6	16,800#	90,700#	200'
⅞"	6	22,700#	122,600#	180'
1"	6	29,600#	159,800#	130'
¾"	8	16,800#	117,400#	180'
⅞"	8	22,700#	158,700#	130'
1"	8	29,600#	206,900#	100'

**Based on the allowable pull for type "N" Extra High Tensile Strength Cable with a factor of safety of 3.5.

Crane Hoist—1" diameter, Type N. (Cable lengths shown are in feet).
Note: For Maximum Capacity — use 8 Part 1" Cable.

Parts of Line	Boom Length (in feet)															
	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200
1	120	140	160	180	200	220	240	260	280	300	320	340	360	380	400	420
2	180	210	240	270	300	330	360	390	420	450	480	510	540	570	600	630
3	240	280	320	360	400	440	480	520	560	600	640	680	720	760	800	840
4	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
5	360	420	480	540	600	660	720	780	840	900	960	1020	1080	1140	1200	1260
6	420	490	560	630	700	770	840	910	980	1050	1120	1190	1260	1330	1400	1470
7	480	560	640	720	800	880	960	1040	1120	1200	1280	1360	1440	1520	1600	
8	540	630	720	810	900	990	1080	1170	1260	1350	1440	1530	1620			

JIB BOOM—(Cable lengths shown are in feet.)

Boom Length (in feet)	Whipline (1 part) ⅞" Cable Type P			Whipline (2 part) ⅞" Cable Type P		
	Jib Length (in feet)			Jib Length (in feet)		
	30	45	60	30	45	60
50	180	210	240	265	310	355
60	200	230	260	295	340	385
70	220	250	280	325	370	415
80	240	270	300	355	400	445
90	260	290	320	385	430	475
100	280	310	340	415	460	505
110	300	330	360	445	490	535
120	320	350	380	475	520	565
130	340	370	400	505	550	595
140	360	390	420	535	580	625
150	380	410	440	565	610	655
160	400	430	460	595	640	685
170	420	450	480	625	670	715
180	440	470	500	655	700	745
190	460	490	520	685	730	775
200	480	510	540	715	760	805

Jib Guy — Extender cables are provided as guys from the jib strut to the jib peak shaft. Basic extender cable for the 30' jib is 66' 4" long. Each 15' jib extension is supplied with two extender cables 14' 4" long. All jib guy extender cables are ¾" diameter, type N.

Boom Guy — Extender cables are provided as guys from the jib strut to the pin connecting lugs on the boom upper section. Three extender cables are provided, one 50' long and two each 5' 6" long. Use of this total length of 61' fixes jib at 30° angle to boom. Removal of one 5' 6" section fixes jib at 15° angle to boom. Removal of both 5' 6" sections fixes jib in line with boom. All boom guy extender cables are ¾" diameter type N.

Main Extender Cables—1¼" diameter, type N with swaged socket ends, connect the boom gantry to the boom head shaft links. Basic extender cables are 26' 4" long. Extender cables for the boom extensions are of the same length as the extensions.

Boom Carrying Equipment Where Overhead Clearance Is Restricted—By substituting two pairs of extender cables with the same total over-all length as one standard pair and attaching a link at each end of the additional pair, over-all main extender cable length may be shortened by lowering boom to ground and lowering boom gantry to a point where the link at one end of one extender cable may be pinned to the link at the other end. When boom is again raised to horizontal, machine will carry 50' through 120' maximum "Hi-Lite" boom with boom gantry restricted to between 14' and 16' over-all height. Loads must not be handled with extender cables shortened.

For 50' Basic Boom—One pair 1¼" diameter by 16' 4" and one pair 1¼" diameter by 10' extender cables are substituted for one pair 1¼" diameter by 26' 4" and connecting links added.

For Any Boom With Both 20' and 30' Extensions—Two pairs 1¼" diameter by 10' extender cables are substituted for one pair 1¼" diameter by 20' and connecting links added.

For Any Boom With 30' Extensions Only—One pair 1¼" diameter by 10' and one pair 1¼" diameter by 20' extender cables are substituted for one pair 1¼" diameter by 30' and connecting links added.

Mid-point Suspension Cables With Boom Gantry—⅞" diameter, 94' 2" long, with zinced socket ends, type N.

Cable Types—

Type B—8 x 25 (8 x 19 class), filler wire, improved plow steel, preformed, fiber center, right lay, regular lay.

Type D—6 x 25 (6 x 19 class), filler wire, improved plow steel, preformed, independent wire rope center, right lay, lang lay.

Type G—6 x 30, flattened strand, improved plow steel, preformed, independent wire rope center, right lay, lang lay.

Type M—6 x 25 (6 x 19 class), filler wire, extra high tensile strength steel, preformed, independent wire rope center, right lay, lang lay.

Type N—6 x 25 (6 x 19 class), filler wire, extra high tensile strength steel, preformed, independent wire rope center, right lay, regular lay.

Type P—18 x 7, non-rotating, extra high tensile strength steel, fiber center.

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