

BUCKNER

HEAVYLIFT CRANES

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PROJECT:
LR 1300SX 233' 2821 ST

LOCATION: -----
BUCKNER CONTACT: Dan Ives, PE
Dani@BucknerCompanies.com
LIFT PLAN BY: Dan Ives, PE
Dani@BucknerCompanies.com

DRAWING NOTES:
Title Page

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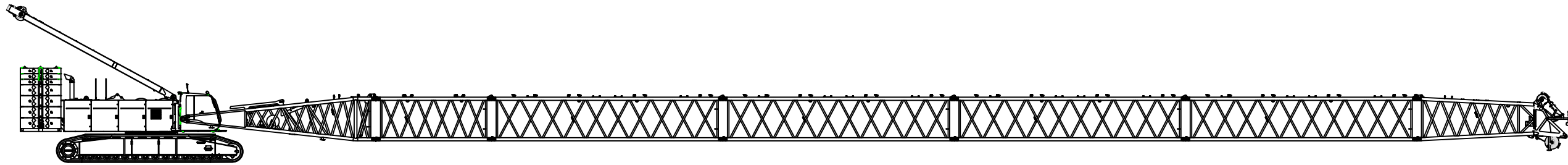
Revisions

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PROJECT:
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DRAWING NOTES:
Build Sheet

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7.5 Main boom 2821

System-relevant information for main boom 2821:

- Configuration of main boom
 - Installation position of rope guide (type A)
 - Mid-point suspensions installation positions
- Lengths of mid-point suspensions
- Overview of main boom 2821 steel pendant straps
- Overview of main boom 2821 CF pendant straps
- Reeving diagrams main boom head 2821 (load position 1)
- Reeving diagrams main boom head 2821 in single hook mode with 2 winches
- Reeving diagrams auxiliary jib (36 t (79300 lb)) on main boom head 2821 (load position 2)

7.5.1 Configuration of main boom



DANGER

Excess length of main boom!
Structural breakdown.

- ▶ Check main boom length in load chart for validity.

Main boom length	Configuration of main boom (symbolic)
20 m 66 ft	
23 m 75 ft	
26 m 85 ft	
29 m 95 ft	
32 m 105 ft	
35 m 115 ft	
38 m 125 ft	
41 m 135 ft	
44 m 144 ft	
47 m 154 ft	
50 m 164 ft	

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Main boom length	Configuration of main boom (symbolic)
53 m 174 ft	
56 m 184 ft	
59 m 195 ft	
62 m 203 ft	
65 m 213 ft	
68 m 223 ft	
71 m 233 ft	
74 m 243 ft	
77 m 253 ft	
80 m 262 ft	
83 m 272 ft	
86 m 282 ft	
89 m 292 ft	
92 m 302 ft	
95 m 312 ft	
98 m 322 ft	
101 m 332 ft	
104 m 342 ft	

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Tab. 388: Configuration of main boom 2821

- S** - Installation position rope guide (type A)
- X1** - Installation position mid-point suspension 1
- X2** - Installation position mid-point suspension 2

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DRAWING NOTES:
Boom Configuration

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Assembly and dismantling

Main boom 2821

A) Machine with CF pendant straps with boom configuration main boom 2821 + luffing jib 1916: Do not install any mid-point suspensions with main boom lengths 77 m (253 ft) and 80 m (262 ft).

7.5.3 Overview of main boom 2821 steel pendant straps

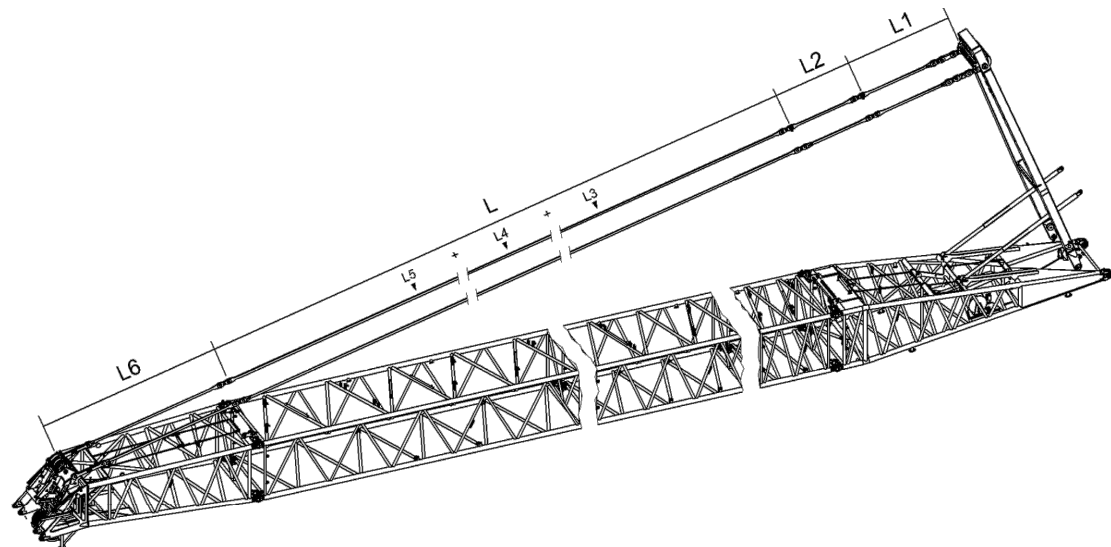


Fig. 2636: Overview of main boom 2821 steel pendant straps

Pendant straps A-frame1 to main boom head 2821

Name	Value
L1 A-frame1 equalizer (For more information see: A-frame1 equalizer, page 65)	3730 mm 12' 3" ft-in
L2 Main boom base section equalizer (For more information see: Equalizer of main boom base section 2821.30, page 165)	2670 mm 8' 9" ft-in
Main boom pendant straps consisting of:	
L3 Main boom pendant strap 3 m (10 ft) (For more information see: Main boom pendant strap 3 m (10 ft), page 166)	Total L3 +
L4 Main boom pendant strap 6 m (20 ft) (For more information see: Main boom pendant strap 6 m (20 ft), page 168)	Total L4 +
L5 Main boom pendant strap 12 m (40 ft) (For more information see: Main boom pendant strap 12 m (40 ft), page 170)	Total L5

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Assembly and dismantling

Main boom 2821

Name	Value
L6 Main boom pendant strap on main boom head 2821 (For more information see: Main boom pendant strap on main boom head 2821.24, page 171)	6300 mm 20' 8" ft-in

Tab. 390: Pendant straps A-frame1 to main boom head 2821

Configuration of main boom pendant straps (L):

Required number of main boom pendant straps 3 m (10 ft) (L3) corresponds to number of main boom sections 3 m (10 ft).

Required number of main boom pendant straps 6 m (20 ft) (L4) corresponds to number of main boom sections 6 m (20 ft).

Required number of main boom pendant straps 12 m (40 ft) (L5) corresponds to number of main boom sections 12 m (40 ft).



Note

► For the admissible number of main boom sections 3 m (10 ft), 6 m (20 ft), 12 m (40 ft), refer to the following table: (For more information see: 7.5.1 Configuration of main boom, page 1056)

7.5.4 Overview of main boom 2821 CF pendant straps

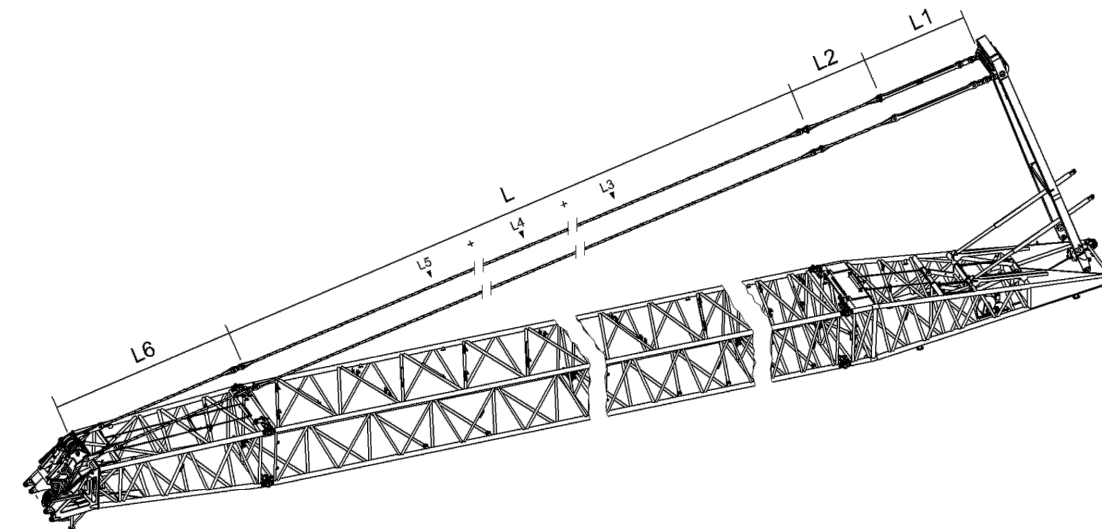


Fig. 2637: Overview of main boom 2821 CF pendant straps

Pendant straps A-frame1 to main boom head 2821

Name	Value
L1 A-frame1 equalizer (For more information see: A-frame1 equalizer, page 66)	3700 mm 12' 2" ft-in

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PROJECT:

LR 1300SX 233' 2821 ST

LOCATION: -----

BUCKNER CONTACT: Dan Ives, PE

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Pendant Straps

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7.5.5 2821 boom head section rope reeving systems (load position 1)

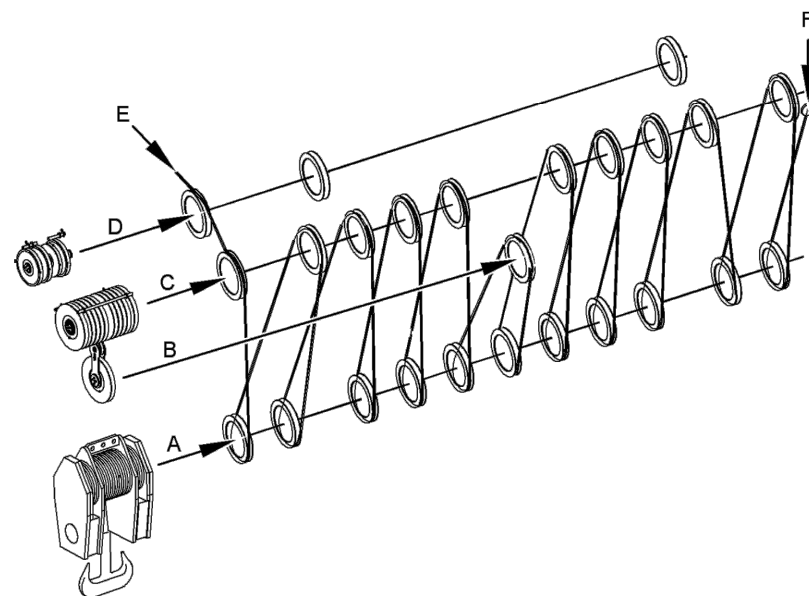


Fig. 2638: 2821 boom head section rope reeving system (load position 1)

- | | |
|---|---|
| A Pulley block roller set | D Boom head section gantry pulleys |
| B 11th pulley on the boom head section | E Winch 1 hoist rope |
| C Boom head section roller set | F Rope fixation |

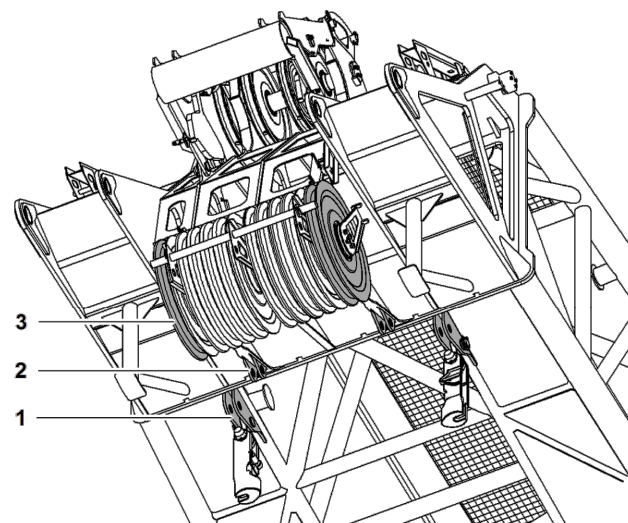


Fig. 2639: Rope fixing points main boom head section 2821

- | | |
|---------------------------------------|----------------------|
| 1 Outer rope fixing point (2x) | 3 Pulley (2x) |
| 2 Inner rope fixing point (2x) | |

If the first or last pulley 3 on the pulley set of the main boom head section is used (reeved), the outer rope fixing point 1 is to be used.

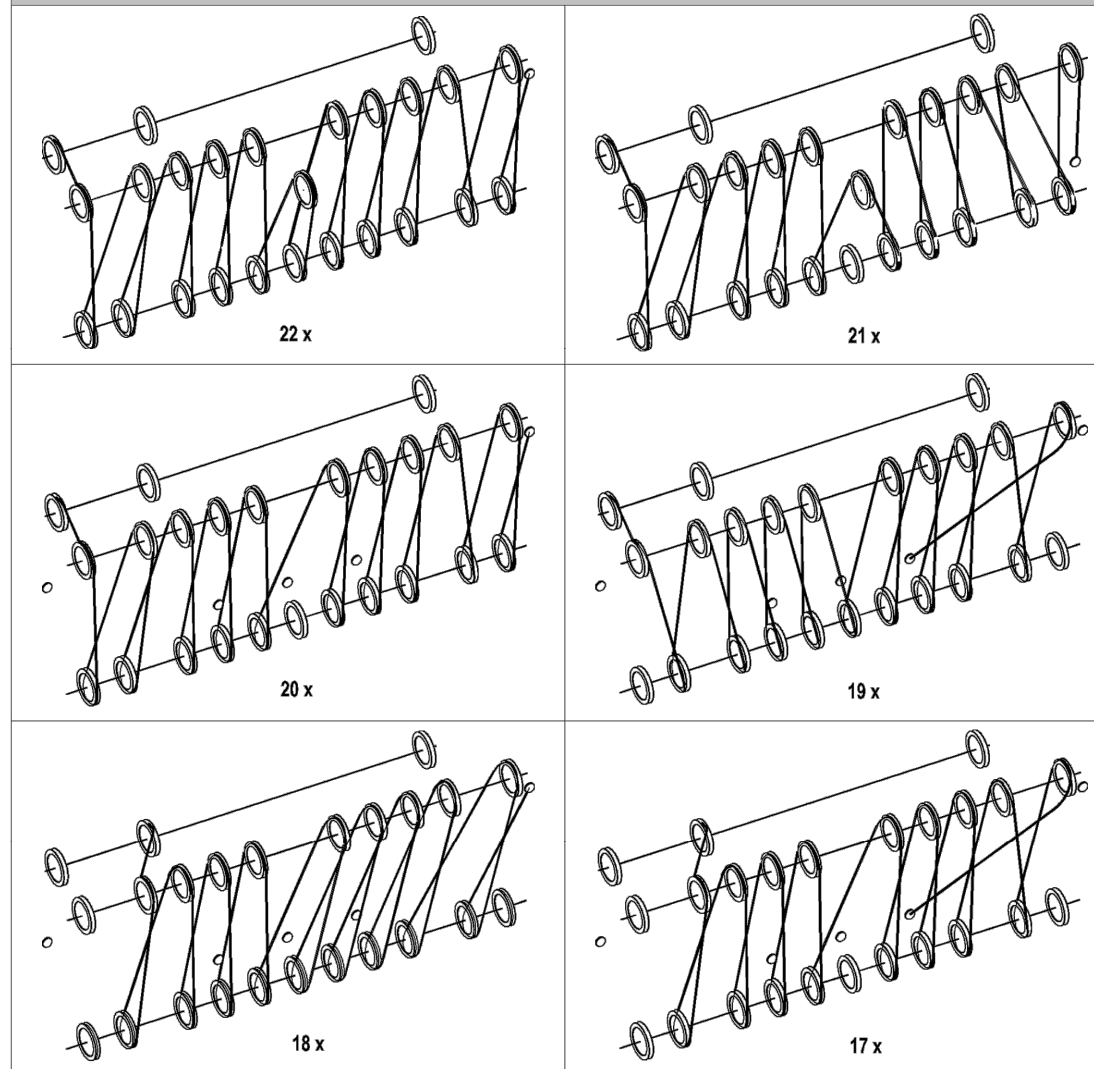
If the first or last pulley 3 on the pulley set of the main boom head section is not used (not reeved), the inner rope fixing point 2 is to be used.



DANGER
Incorrect number of reevings!
Boom damage, machine toppling over.

► Choose the correct number of reevings as per the load chart.

2821 boom head section rope reeving systems (load position 1)



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DRAWING NOTES:
Reeving 1

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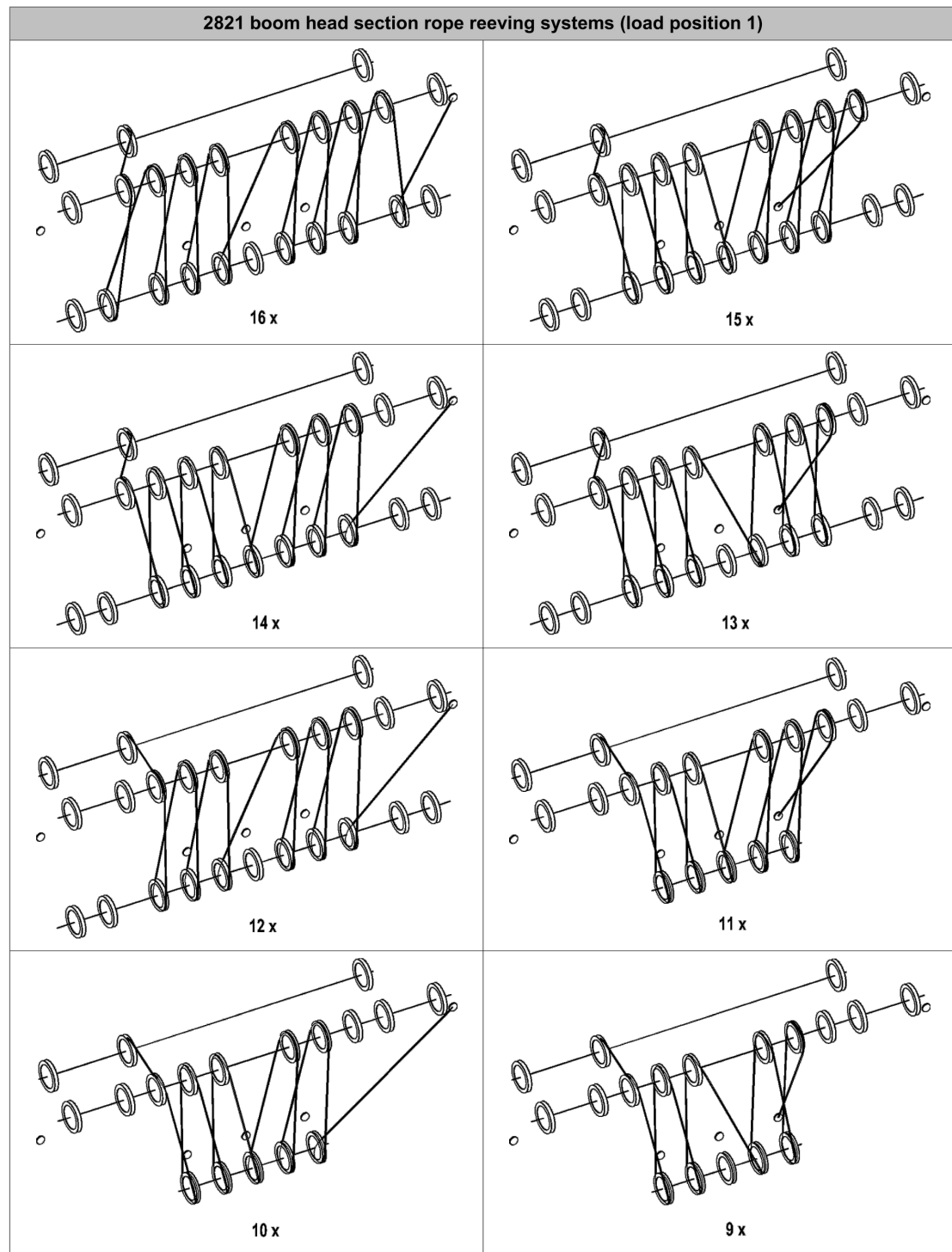
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Assembly and dismantling

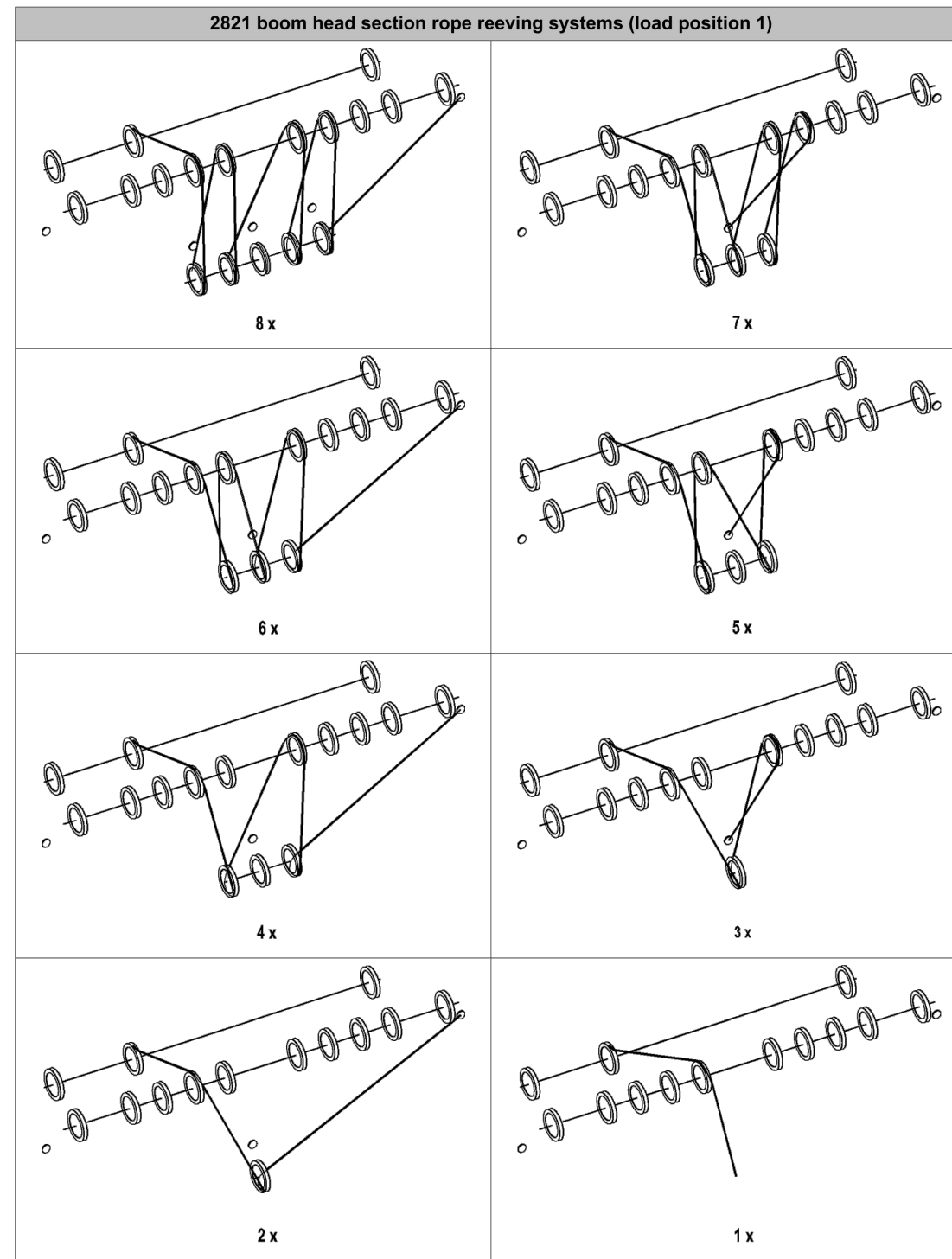
Main boom 2821



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Assembly and dismantling

Main boom 2821



LWN/LR.x/LR 1300 SX V02.01//Auslieferung/2014-07-22/en

Tab. 392: 2821 boom head section rope reeving systems (load position 1)

PROJECT:
LR 1300SX 233' 2821 ST

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Reeving 2

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LR1300SX

Erectability charts

Boom configuration: Main boom + fixed jib
Ident. no.: /10539958/141906

Table with 2 columns: Main boom length [ft], Jib length [ft]. Rows include boom lengths from 66 to 272 and jib lengths from 23 to AB. Includes notes on counterweights and wide track.



LR1300SX

Erectability charts

Boom configuration: Main boom + fixed jib
Ident. no.: /10539958/141906

Table with 2 columns: Main boom length [ft], Jib length [ft]. Rows include boom lengths from 66 to 272 and jib lengths from 23 to AB. Includes notes on counterweights and blocked crawlers.

PROJECT: LR 1300SX 233' 2821 ST

LOCATION:
BUCKNER CONTACT: Dan Ives, PE
LIFT PLAN BY: Dan Ives, PE

DRAWING NOTES:
Erection and Takedown

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LR1300SX

Load capacities main boom

Ident. no.: 10539958/141906/ Main boom foot: 2821-1
 Slewing range: 360 ° Main boom head: 2821-1
 Foot print: 2 - Wide track
 Rear counterweight [1000 lbs]: 273.4
 Carbody counterweight [1000 lbs]: 125.7

Outre-ach [ft]	Main boom angle [°]	Rope pulley height [ft]	Load capacity [1000 lbs]
233 ft Main boom, Load fall point Main boom head (2821-1)			
26	86	240	66.4
30	85	239	312.5
35	83.7	238	290.7
40	82.5	238	270.2
45	81.2	237	237.8
50	80	236	212.2
55	78.7	235	191.3
60	77.5	234	169.0
65	76.2	233	150.8
70	74.9	231	135.7
75	73.6	230	123.0
80	72.3	228	112.2
85	71	226	102.8
90	69.7	225	94.6
95	68.4	223	87.5
100	67.1	220	81.1
105	65.7	218	75.4
110	64.3	216	70.2
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120	61.6	210	61.4
125	60.1	208	57.6
130	58.7	204	54.1
135	57.2	201	50.8
140	55.7	198	47.9
145	54.2	194	45.1
150	52.7	190	42.5
155	51.1	186	40.1
160	49.5	182	37.9
165	47.8	177	35.8
170	46.1	172	33.9
175	44.7	168	32.2
180	42.9	163	30.5
185	41	157	28.8
190	39.1	151	27.3
195	37	145	25.8
200	34.9	137	24.4
205	32.6	130	23.1
210	30.2	121	21.8
215	27.6	112	20.6
220	24.7	101	19.5
225	21.4	89	18.4
230	17.5	74	17.3

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Load Chart

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