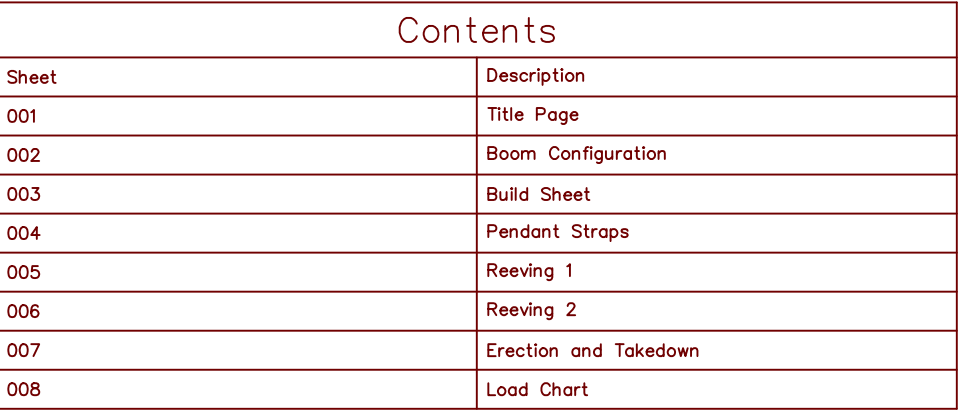




BUCKNER
HEAVYLIFT CRANES

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 for one rope across main boom head 2821 (load position1)
 - Reeving diagrams for two ropes across main boom head 2821 (load position1)
 - Reeving diagrams for one rope across auxiliary jib (36 t (79300 lb)) on main boom head 2821 (load position1)
 - Reeving diagrams for two ropes across auxiliary jib (36 t (79300 lb)) and main boom head 2821 (load position 1)
 - Reeving diagrams jib luffing winch as auxiliary winch

7.5.1 Configuration of main boom



DANGER
Assembly with excessive main boom length!
Structural failure.
► Check main boom length in load chart for validity.

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

Main boom length	Configuration of main boom (symbolic)
50 m 164 ft	
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	

Tab. 515: Configuration of main boom 2821

- A) Install rope guide exclusively with boom configuration 4, when reeving load position1 **and** load position 2.
- S** - Installation position rope guide (type A)
S* - Installation position rope guide (type A)

PROJECT:
LR 1300SX 174' 2821 ST

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

DRAWING NOTES:
Boom Configuration

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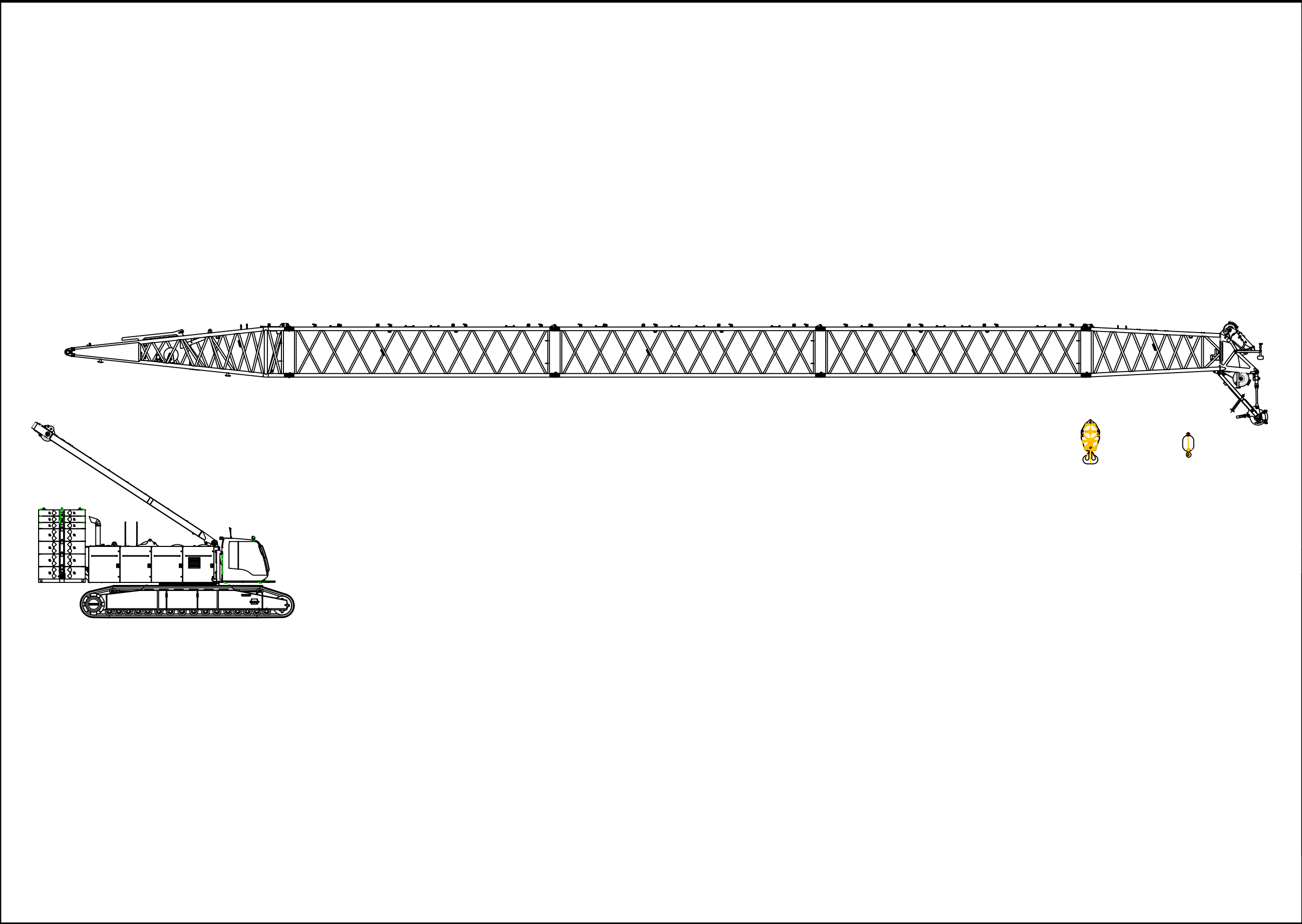
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PROJECT:
LR 1300SX 174' 2821 ST

LOCATION:-----

BUCKNER CONTACT:Dan Ives, PE
Dani@BucknerHeavylift.com

LIFT PLAN BY:Dan Ives, PE
Dani@BucknerHeavylift.com

DRAWING NOTES:
Build Sheet

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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

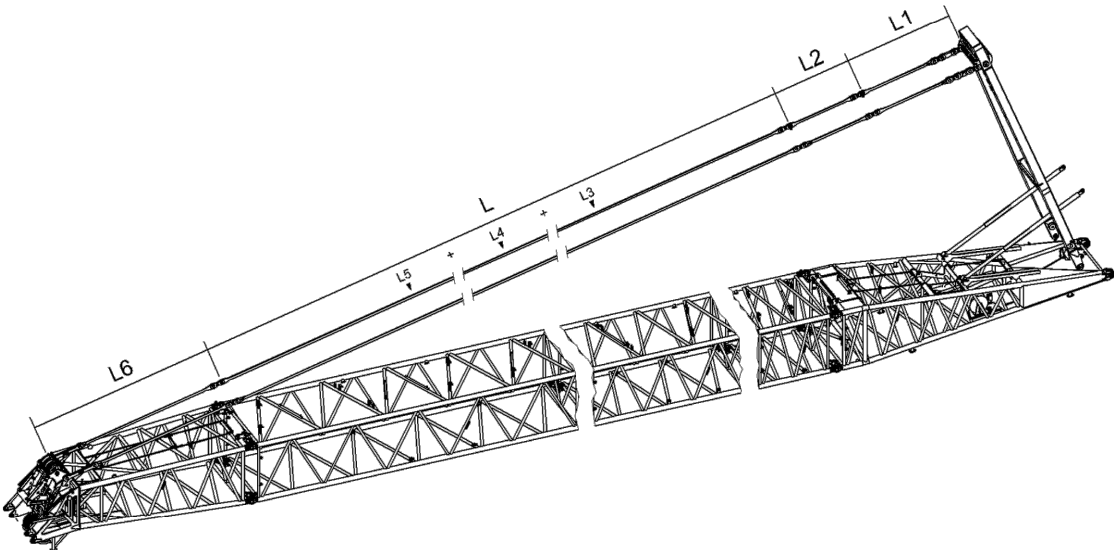


Fig. 2636: Overview of main boom 2821 steel pendant straps

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
L	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

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

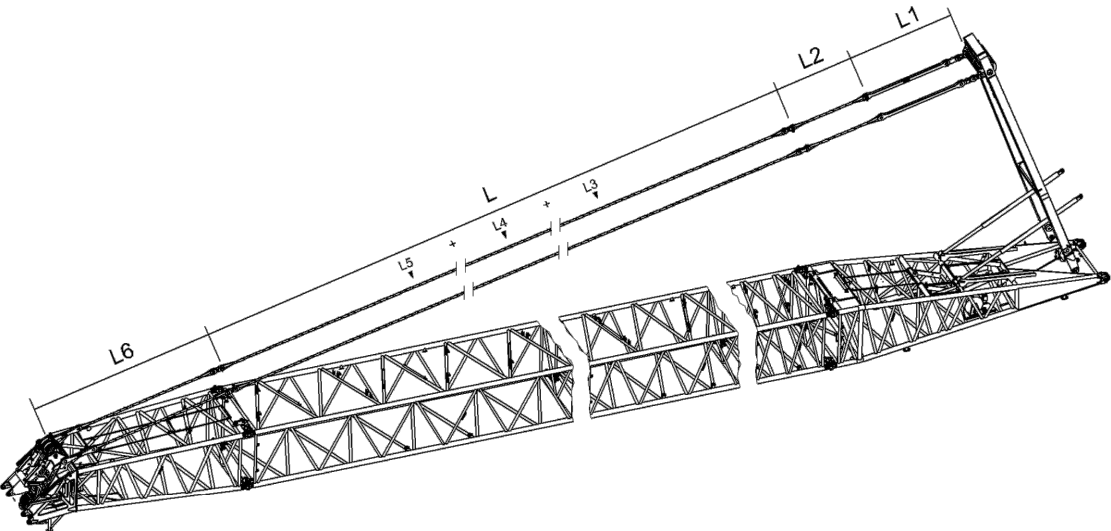


Fig. 2637: Overview of main boom 2821 CF pendant straps

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

PROJECT:
LR 1300SX 174' 2821 ST

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

DRAWING NOTES:
Pendant Straps

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

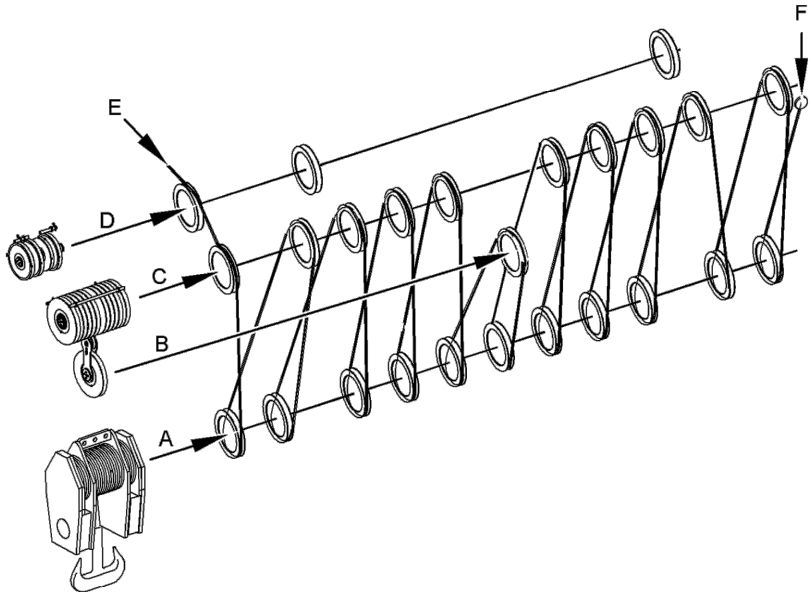


Fig. 2638: 2821 boom head section rope reeving system (load position 1)

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

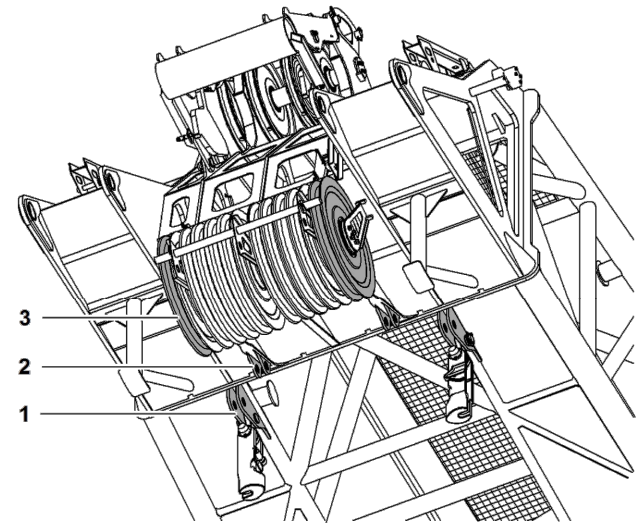


Fig. 2639: Rope fixing points main boom head section 2821

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

LWNLR.x\LR 1300 SX V02.01\Auslieferung\2014-07-22\en

LWNLR.x\LR 1300 SX V02.01\Auslieferung\2014-07-22\en

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.

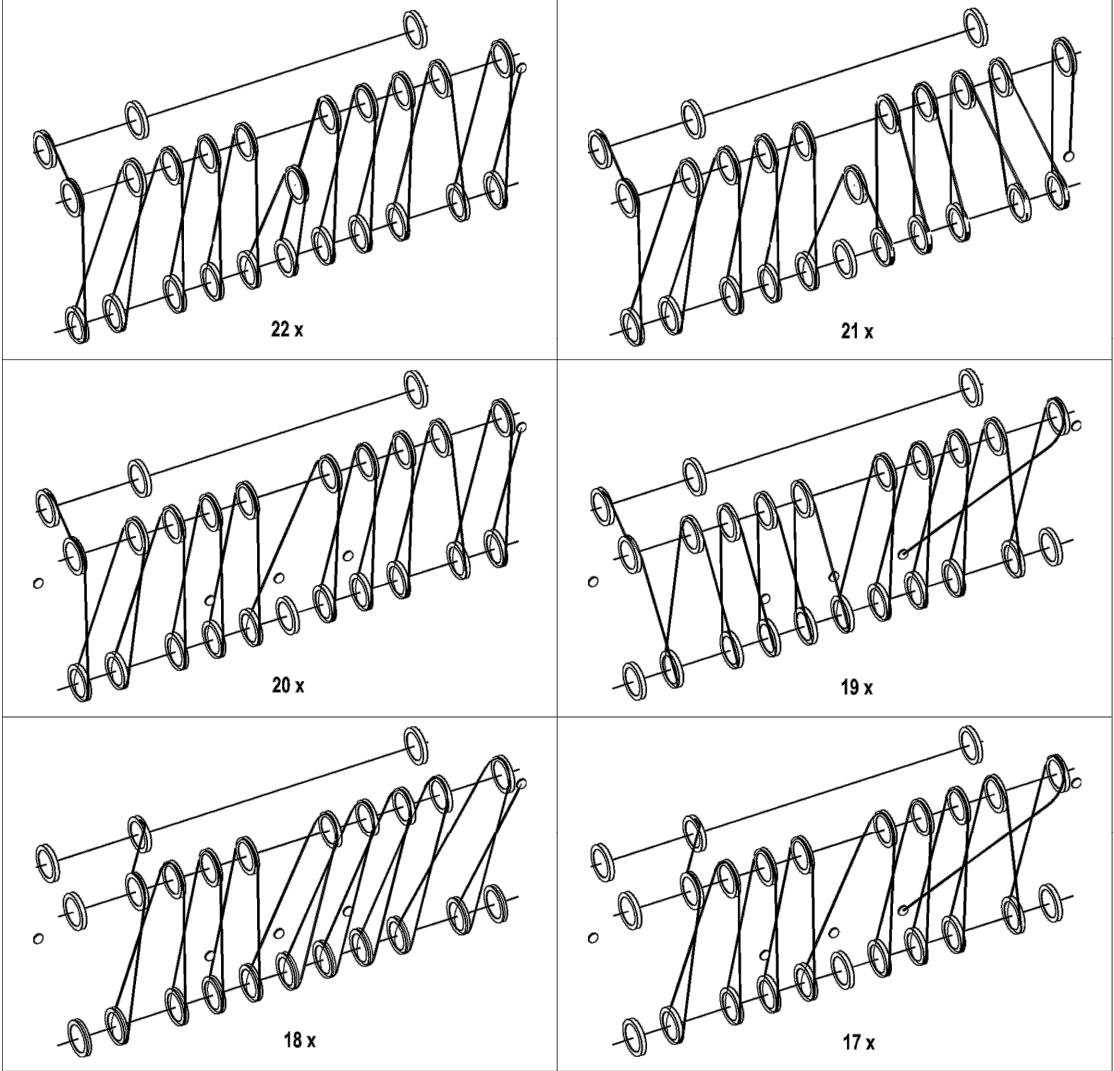
If the first or last pulley 3 on the pulley set of the main boom head section is not used (not reeved), the inner rope fixing point 2 is to be used.



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)



PROJECT:
LR 1300SX 174' 2821 ST

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

DRAWING NOTES:
Reeving 1

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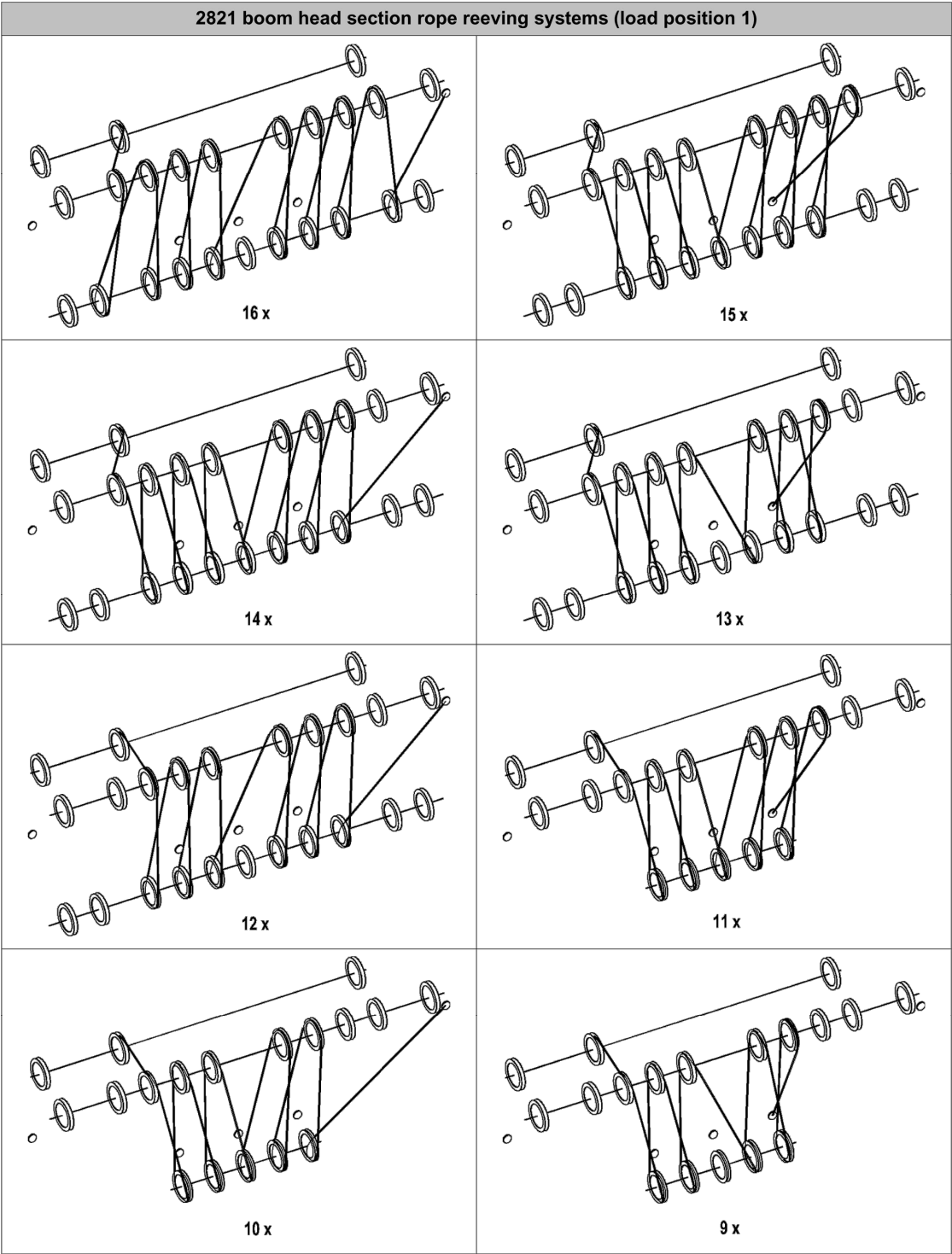
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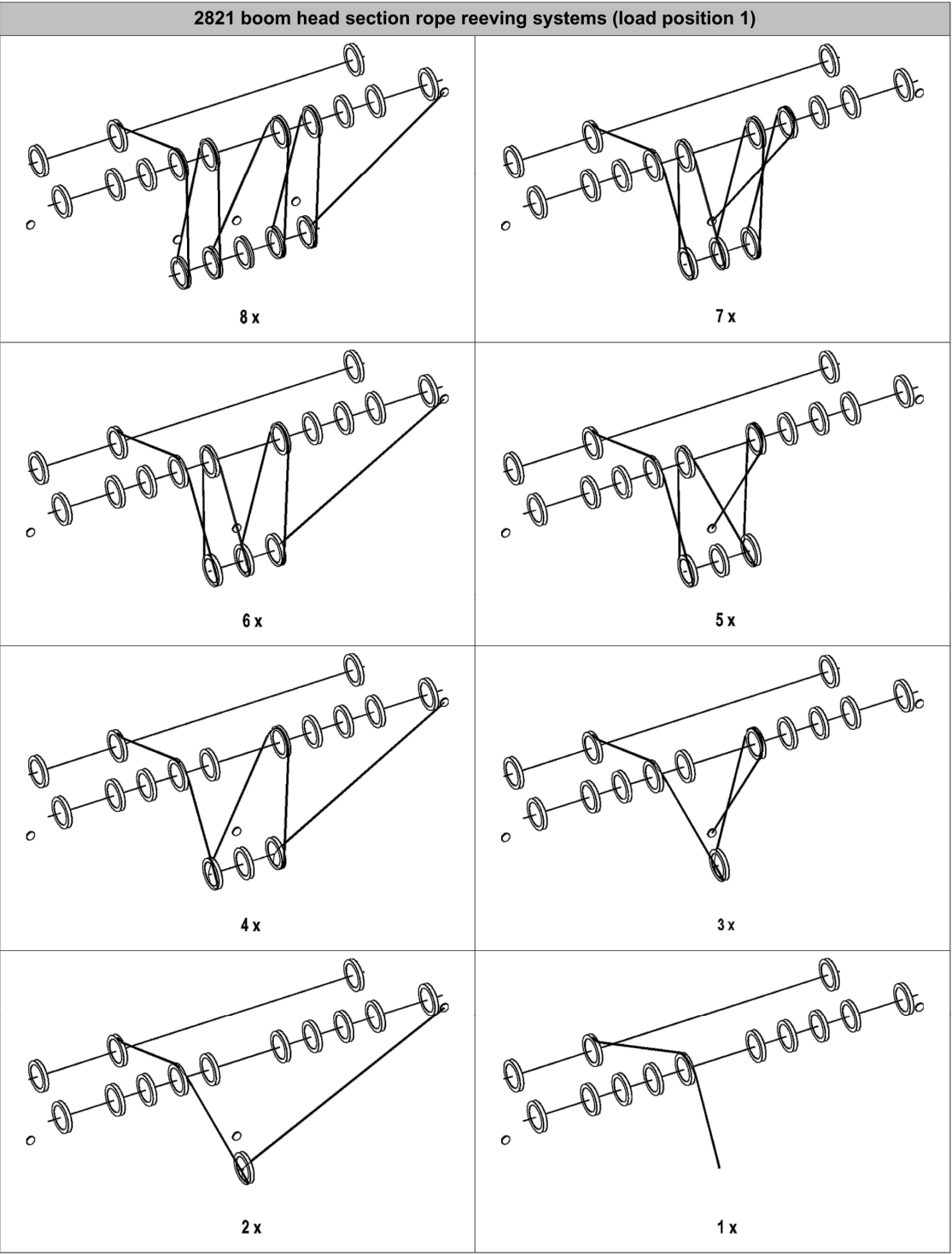
Assembly and dismantling

Main boom 2821



Assembly and dismantling

Main boom 2821



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

PROJECT:
LR 1300SX 174' 2821 ST

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

DRAWING NOTES:
Reeving 2

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

Main boom 2821-1 + Jib 0906-1 Jib head 0906-1 Offset 30 Rear counterweight 273.4 [1000 lbs] + Carbody counterweight 125.7 [1000 lbs]	
2 - Wide track	
Main boom length [ft]	Jib length [ft]
	23
66	ABC
75	ABC
85	ABC
95	ABC
105	ABC
115	ABC
125	ABC
135	ABC
144	ABC
154	ABC
164	ABC
174	ABC
184	ABC
194	ABC
203	ABC
213	ABC
223	ABC
233	ABC
243	ABC
253	ABC
262	ABC
272	AB
Load hook/pulley block always on ground	

LR1300SX

Erectability charts



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

Main boom 2821-1 + Jib 0906-1 Jib head 0906-1 Offset 30 Rear counterweight 273.4 [1000 lbs] + Carbody counterweight 125.7 [1000 lbs]	
3 - Blocked Crawlers	
Main boom length [ft]	Jib length [ft]
	23
66	ABC
75	ABC
85	ABC
95	ABC
105	ABC
115	ABC
125	ABC
135	ABC
144	ABC
154	ABC
164	ABC
174	ABC
184	ABC
194	ABC
203	ABC
213	ABC
223	ABC
233	ABC
243	ABC
253	ABC
262	ABC
272	AB
Load hook/pulley block always on ground	

LR1300SX

Erectability charts

PROJECT:
LR 1300SX 174’ 2821 ST

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

DRAWING NOTES:
Erection and Takedown

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SHEET: 007 OF 008



Ident. no.:	10539958/211121/0	Mode:	Object handling
Swing range:	360°	Job site:	Land
Track width:	2 - Wide track		
Rear counterweight [1000 lbs]:	273.4		
Carbody counterweight [1000 lbs]:	125.7	Main boom length [ft]:	174
Main boom head:	2821-1	Main boom base section:	2821.30
Reeving:	Best of	Inclination [°]:	0

Radius [ft]	Main boom angle [°]	Rope pulley height [ft]	Load [1000 lbs]
21.6	86.0	180.6	457.1
25.0	84.9	180.3	443.9
30.0	83.2	179.6	376.5
35.0	81.6	178.9	323.9
40.0	79.9	177.9	284.5
45.0	78.2	176.8	254.0
50.0	76.5	175.6	222.2
55.0	74.8	174.2	194.2
60.0	73.1	172.6	172.0
65.0	71.3	170.9	154.0
70.0	69.6	169.0	139.0
75.0	67.8	166.9	126.4
80.0	66.0	164.6	115.6
85.0	64.1	162.2	106.3
90.0	62.3	159.5	98.2
95.0	60.4	156.6	91.0
100.0	58.4	153.5	84.7
105.0	56.4	150.2	79.0
110.0	54.4	146.5	73.9
115.0	52.3	142.6	69.3
120.0	50.2	138.4	65.1
125.0	47.9	133.9	61.3
130.0	45.6	129.0	57.8
135.0	43.2	123.6	54.6
140.0	40.7	117.8	51.6
145.0	38.0	111.4	48.8
150.0	35.2	104.4	46.3
155.0	32.1	96.5	43.8
160.0	28.7	87.5	41.6
165.0	24.9	77.0	39.5
170.0	20.3	64.2	37.5
175.0	15.9	51.2	33.4

Valid only with preface

PROJECT:
LR 1300SX 174' 2821 ST

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

DRAWING NOTES:
Load Chart

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