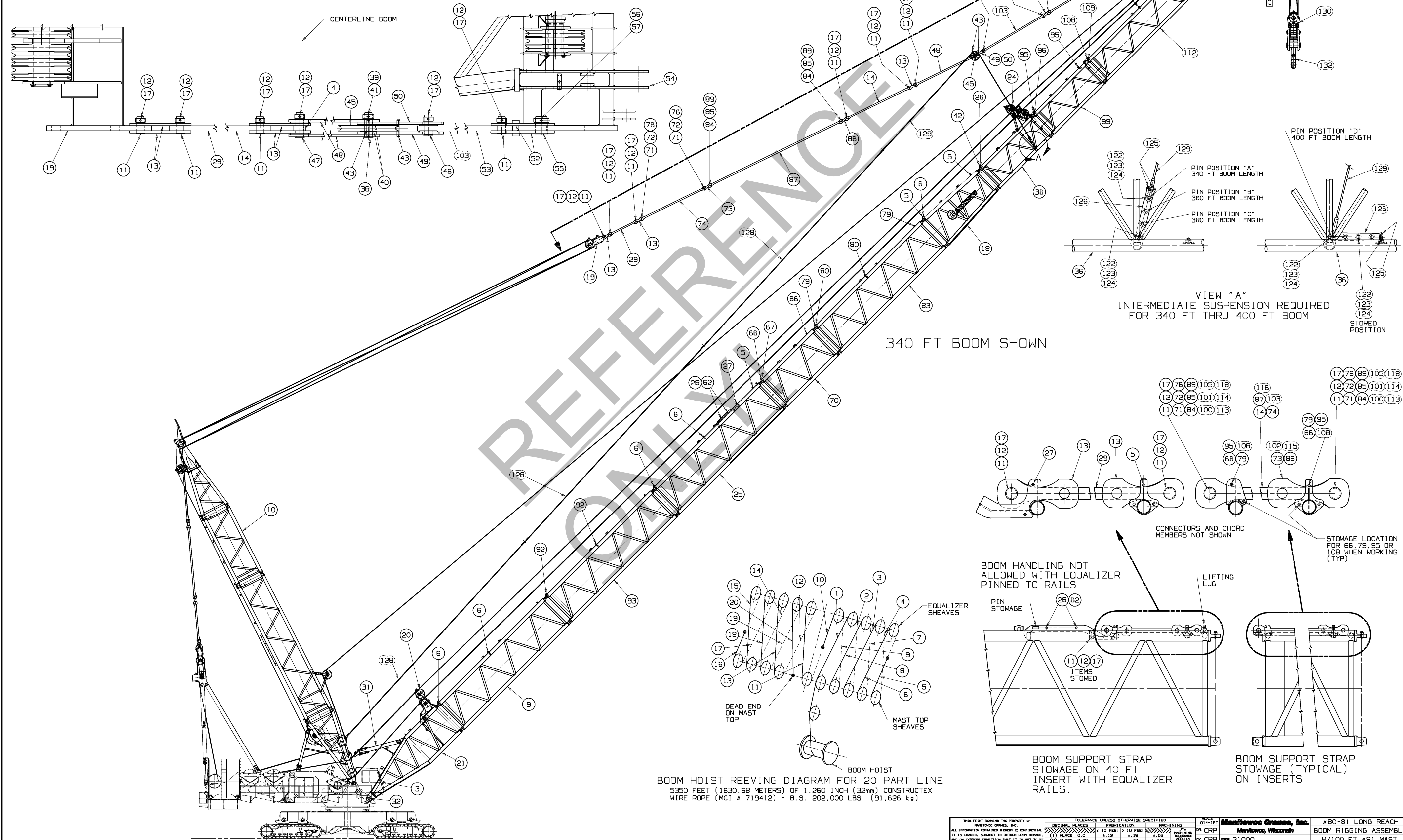


ADDITIONAL PARTS REQUIRED FOR VARIOUS BOOM LENGTHS

ITEM NO.	70	83	93	99	112	74 OR 103	87 OR 116	66, 79, 95 OR 108	67, 80, 92, 96, OR 109	73, 86, 102 OR 115	72, 85, 101 OR 114	71, 84, 100 OR 113	76, 89, 105 OR 118	INTERMEDIATE SUSPENSION	PIN POSITION (SEE VIEW "A")
BOOM LENGTH	20 FT 6.10 M INSERT #80 BOOM	40 FT 12.19 M INSERT #80 BOOM	40 FT 12.19 M INSERT #80 BOOM	20 FT 6.10 M INSERT #81 BOOM	40 FT 12.19 M INSERT #81 BOOM	20 FT (6.10M) STRAP	40 FT (12.19M) STRAP	PIN	TIMBER	BOOM SUPPORT STRAP	COLLAR	PIN	PIN	REQUIRED	
FEET	METERS														
180 (BASIC)	54.9	0	0	0	0	0	0	0	0	0	0	0	0	NO	
200	61.0	1	0	0	0	0	0	0	1	0	0	0	0	NO	
220	67.1	0	0	1	0	0	0	0	2	0	0	0	0	NO	
240	73.2	1	0	1	0	0	2	4	3	4	4	4	4	NO	
260	79.2	0	1	1	0	0	2	4	4	4	4	4	4	NO	
280	85.3	1	1	1	0	0	2	8	5	8	8	8	8	NO	
300	91.4	1	1	1	1	0	4	12	6	12	12	12	12	NO	
320	97.5	1	1	1	0	1	2	12	7	12	12	12	12	NO	
340	103.6	1	1	1	1	1	4	16	8	16	16	16	16	YES	"A"
360	109.7	1	1	1	0	2	6	16	9	16	16	16	16	YES	"B"
380	115.8	1	1	1	1	2	4	20	10	20	20	20	20	YES	"C"
400	121.9	1	1	1	0	3	2	20	11	20	20	20	20	YES	"D"



ITEM NO.	DESCRIPTION	QUANTITY	MATERIAL	DATE	BY
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REVISIONS

1-B-02 EDB
A ADDED ITEM 137
B ADDED ITEM 138
C 02-24-10 JAS
D 02-24-10 JAS
E ADDED ITEMS
58, 59, 60

192590

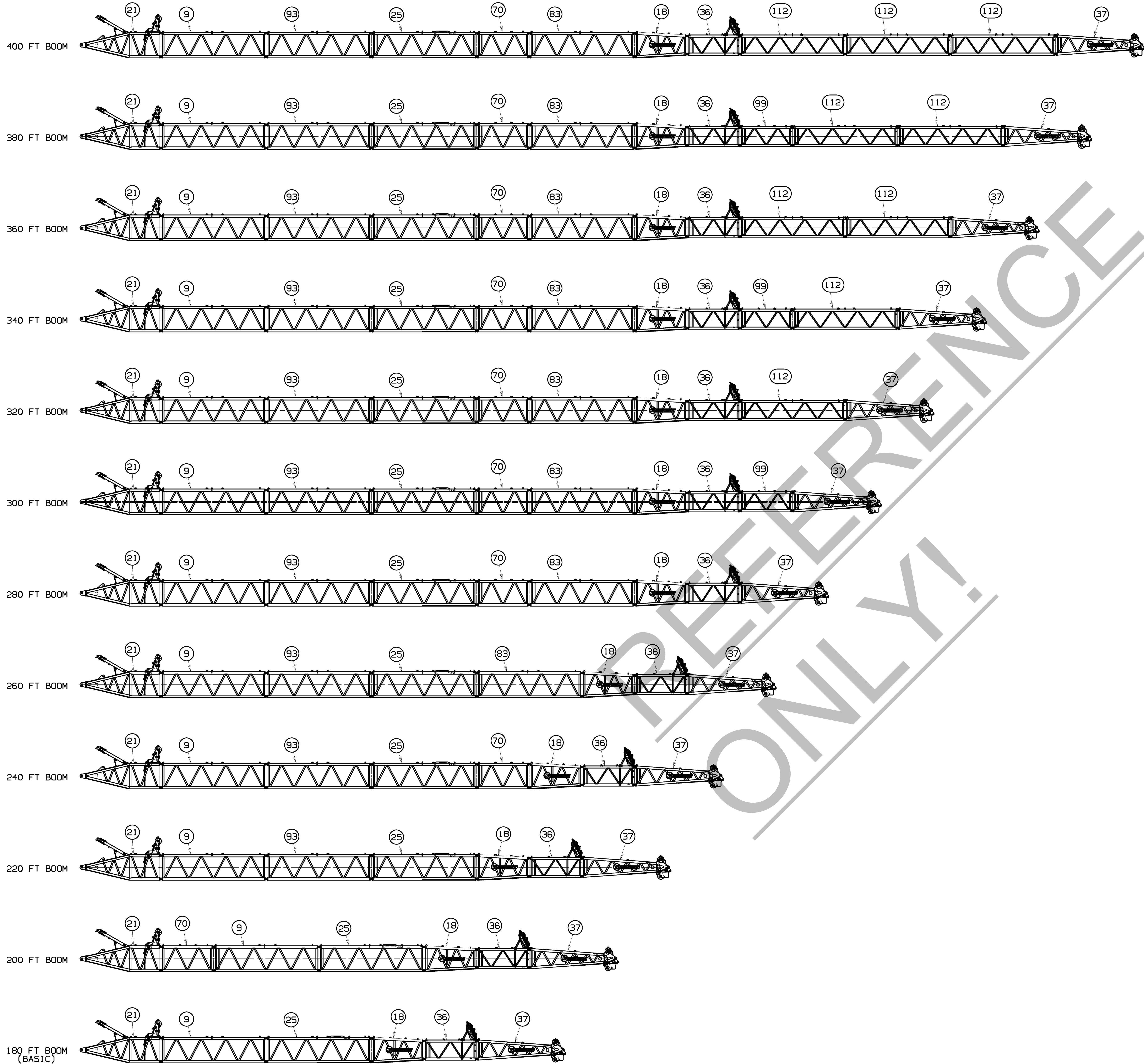
SHT 1 OF 2

PRIVATE LABELING
REQUIREMENT TO
CONFORM TO
ENGINEERING
SPECIFICATION
6629103794 FOR
COMPONENTS LISTED
IN 6629103794

DATE
8-11-99

PATTERN NO.

192590



RECOMMENDED BOOM ASSEMBLY

9981-0030 40 FT INSERT #80 BM (12.19M)		
922	TIMBER	178905
931	40 FT INSERT	192576 2
94		
9981-0040 20 FT INSERT #81 BM (6.10M)		
954	PIN	175160
961	TIMBER	178905
97		
98		
991	20 FT INSERT	192577 2
1004	PIN	192595
1014	COLLAR	192596
1024	BOOM SUPPORT STRAP - 1FT 8.00	192597
1032	BOOM SUPPORT STRAP - 20FT 0.00	192598
104		
1054	PIN	192603
106		
107		

9981-0050 40 FT INSERT #81 BM (6.10M)		
1084	PIN	175160
1092	TIMBER	178905
110		
111		
1121	40 FT INSERT	192578 2
1134	PIN	192595
1144	COLLAR	192596
1154	BOOM SUPPORT STRAP - 1FT 8.00	192597
1162	BOOM SUPPORT STRAP - 40FT 0.00	192599
117		
1184	PIN	192603
119		
120		

9981-0060 INTERMEDIATE SUSPENSION		
121		
1224	PIN	194271
1234	COLLAR	194272
1244	PIN	194273
1254	PIN	194274
1264	LINK	194275
127		
1286	PENDANT - (69FT-9.00) DWG.77535	277361
1292	PENDANT - (64FT-1.00) DWG.77535	277486

OPTIONAL PARTS		
9981-0070 600T BLOCK W/O HOOK		
1301	600T BLOCK ASSEMBLY W/O HOOK	236496 1
131		
132		

9981-0080 600T HOOK ASSEMBLY		
1331	600T HOOK ASSEMBLY	236497 1
134		
135		

9981-0090 UPPER BOOM POINT ASSEM		
1361	UPPER BOOM POINT ASSEMBLY	193871
9981-0100 UPPER BOOM POINT SINGLE PART LINE		
A1371	30T HOOK ASSEMBLY	A00816 1

9981-0110 UPPER BOOM POINT TWO PART LINE		
B1381	45T HOOK ASSEMBLY	236503 1
9981-0120 RIGGING WINCH ASSEMBLY		
E1391	RIGGING WINCH ASSEMBLY	A14234
BOOM ASSEMBLY LADDER STORAGE		
F1401	BOOM ASSEMBLY LADDER STORAGE	A14360

OPTIONAL CAT WALK ASSEMBLIES		
141	CAT WALK ASSY 40FT #80 INSERT	81016924 2
142	CAT WALK ASSY 20FT #80/81 INSERT TRANSITION	81016921 2
143	CAT WALK ASSY 30FT #80 BUTT	81016919 2
144	CAT WALK ASSY 40FT #80 INSERT	81016922 2
145	CAT WALK ASSY 20FT #81 INSERT TRANSITION	81016927 2
146	CAT WALK ASSY 30FT #81 TOP	81016926 2
147	CAT WALK ASSY 20FT #80 INSERT	81016923 2
148	CAT WALK ASSY 40FT #80 INSERT	81016924 2
149	CAT WALK ASSY 20FT #81 INSERT	81016931 2
150	CAT WALK ASSY 40FT #81 INSERT	81016932 2

C 1 WEIGHT BALL MUST BE A MINIMUM OF 2200 LBS. FOR UPPER BOOM POINT.

M 2 OPTIONAL CAT WALK ASSEMBLY QTY 1 CAT WALK ASSY PER BOOM SECTION

BOOM SECTION	OPTIONAL CAT WALK ASSY
192576	81016924
192882	81016921
192987	81016919
193259	81016922
194080	81016927
194081	81016926
192575	81016923
192576	81016924
192577	81016931
192578	81016932

BILL OF MATERIAL				ASSEMBLIES USED ON
QTY	ITEM NO.	DESCRIPTION	MATERIAL	
9981-0000 BASIC BOOM 180 FT (54.9M)				D G
1	2	SIGN BOOM MANITOWOC	81008829	
2				REVISIONS
3	1	BOOM ANGLE INDICATOR ASSEMBLY	168779	
4	2	SPACER	173373	1-8-02 EDB ADDED 91 WAS 22656 10-17-05 KJB REPLACED 92-24-10 JAS 61 WAS A02375 HUKI ADDED UPDATED LUFFING JIB SIGN 02-15-12 JMG ADDED ADDED NOTE
5	8	PIN	175160	
6	5	TIMBER	178905	1-8-02 EDB ADDED 91 WAS 22656 10-17-05 KJB REPLACED 92-24-10 JAS 61 WAS A02375 HUKI ADDED UPDATED LUFFING JIB SIGN 02-15-12 JMG ADDED ADDED NOTE
7				
8				1-8-02 EDB ADDED 91 WAS 22656 10-17-05 KJB REPLACED 92-24-10 JAS 61 WAS A02375 HUKI ADDED UPDATED LUFFING JIB SIGN 02-15-12 JMG ADDED ADDED NOTE
9	1	40 FT INSERT	192576 2	
10	1	MAST ASSEMBLY	192588	1-8-02 EDB ADDED 91 WAS 22656 10-17-05 KJB REPLACED 92-24-10 JAS 61 WAS A02375 HUKI ADDED UPDATED LUFFING JIB SIGN 02-15-12 JMG ADDED ADDED NOTE
11	12	PIN	192595	
12	16	COLLAR	192596	1-8-02 EDB ADDED 91 WAS 22656 10-17-05 KJB REPLACED 92-24-10 JAS 61 WAS A02375 HUKI ADDED UPDATED LUFFING JIB SIGN 02-15-12 JMG ADDED ADDED NOTE
13	12	BOOM SUPPORT STRAP - 1FT 8.00	192597	
14	2	BOOM SUPPORT STRAP - 20FT 0.00	192598	1-8-02 EDB ADDED 91 WAS 22656 10-17-05 KJB REPLACED 92-24-10 JAS 61 WAS A02375 HUKI ADDED UPDATED LUFFING JIB SIGN 02-15-12 JMG ADDED ADDED NOTE
15				
16				1-8-02 EDB ADDED 91 WAS 22656 10-17-05 KJB REPLACED 92-24-10 JAS 61 WAS A02375 HUKI ADDED UPDATED LUFFING JIB SIGN 02-15-12 JMG ADDED ADDED NOTE
17	16	PIN	192603	
18	1	20 FT TAPERED INSERT	192882 2	1-8-02 EDB ADDED 91 WAS 22656 10-17-05 KJB REPLACED 92-24-10 JAS 61 WAS A02375 HUKI ADDED UPDATED LUFFING JIB SIGN 02-15-12 JMG ADDED ADDED NOTE
19	1	EQUALIZER ASSEMBLY	192970	
20	1	WIRE ROPE GUIDE ASSEMBLY - BOOM BUTT	192971	1-8-02 EDB ADDED 91 WAS 22656 10-17-05 KJB REPLACED 92-24-10 JAS 61 WAS A02375 HUKI ADDED UPDATED LUFFING JIB SIGN 02-15-12 JMG ADDED ADDED NOTE
21	1	30 FT BOOM BUTT	192987 2	
22				1-8-02 EDB ADDED 91 WAS 22656 10-17-05 KJB REPLACED 92-24-10 JAS 61 WAS A02375 HUKI ADDED UPDATED LUFFING JIB SIGN 02-15-12 JMG ADDED ADDED NOTE
23				
24	1	WIRE ROPE GUIDE ASSEMBLY	193208	1-8-02 EDB ADDED 91 WAS 22656 10-17-05 KJB REPLACED 92-24-10 JAS 61 WAS A02375 HUKI ADDED UPDATED LUFFING JIB SIGN 02-15-12 JMG ADDED ADDED NOTE
25	1	40 FT INSERT W/EQUALIZER RAILS	193259 2	
26	2	TIMBER	193273	1-8-02 EDB ADDED 91 WAS 22656 10-17-05 KJB REPLACED 92-24-10 JAS 61 WAS A02375 HUKI ADDED UPDATED LUFFING JIB SIGN 02-15-12 JMG ADDED ADDED NOTE
27	2	PIN	193276	
28	4	PIN	193277	1-8-02 EDB ADDED 91 WAS 22656 10-17-05 KJB REPLACED 92-24-10 JAS 61 WAS A02375 HUKI ADDED UPDATED LUFFING JIB SIGN 02-15-12 JMG ADDED ADDED NOTE
29	2	BOOM SUPPORT STRAP - 7 FT 6.88	193278	
30			193373	1-8-02 EDB ADDED 91 WAS 22656 10-17-05 KJB REPLACED 92-24-10 JAS 61 WAS A02375 HUKI ADDED UPDATED LUFFING JIB SIGN 02-15-12 JMG ADDED ADDED NOTE
31	1	BOOM STOP ASSEMBLY	193409	
32	1	PIN PULLER ASSEMBLY	193481	1-8-02 EDB ADDED 91 WAS 22656 10-17-05 KJB REPLACED 92-24-10 JAS 61 WAS A02375 HUKI ADDED UPDATED LUFFING JIB SIGN 02-15-12 JMG ADDED ADDED NOTE
33				
34				1-8-02 EDB ADDED 91 WAS 22656 10-17-05 KJB REPLACED 92-24-10 JAS 61 WAS A02375 HUKI ADDED UPDATED LUFFING JIB SIGN 02-15-12 JMG ADDED ADDED NOTE
35				
36	1	20 FT TRANSITION INSERT FOR #81 BM.	194080 2	1-8-02 EDB ADDED 91 WAS 22656 10-17-05 KJB REPLACED 92-24-10 JAS 61 WAS A02375 HUKI ADDED UPDATED LUFFING JIB SIGN 02-15-12 JMG ADDED ADDED NOTE
37	1	30 FT BOOM TOP FOR #81 BM.	194081 2	
38	2	PIN	194112	1-8-02 EDB ADDED 91 WAS 22656 10-17-05 KJB REPLACED 92-24-10 JAS 61 WAS A02375 HUKI ADDED UPDATED LUFFING JIB SIGN 02-15-12 JMG ADDED ADDED NOTE
39	2	COLLAR	194113	
40	4	WASHER - BRONZE	194114	1-8-02 EDB ADDED 91 WAS 22656 10-17-05 KJB REPLACED 92-24-10 JAS 61 WAS A02375 HUKI ADDED UPDATED LUFFING JIB SIGN 02-15-12 JMG ADDED ADDED NOTE
41	2	PIN	194115	
42	2	PIN	194116	1-8-02 EDB ADDED 91 WAS 22656 10-17-05 KJB REPLACED 92-24-10 JAS 61 WAS A02375 HUKI ADDED UPDATED LUFFING JIB SIGN 02-15-12 JMG ADDED ADDED NOTE
43	4	PIN	194117	
44				1-8-02 EDB ADDED 91 WAS 22656 10-17-05 KJB REPLACED 92-24-10 JAS 61 WAS A02375 HUKI ADDED UPDATED LUFFING JIB SIGN 02-15-12 JMG ADDED ADDED NOTE
45	2	SHEAVE SUB-ASSEMBLY 30.00 DIA	194141	
46	2	PIN	194142	1-8-02 EDB ADDED 91 WAS 22656 10-17-05 KJB REPLACED 92-24-10 JAS 61 WAS A02375 HUKI ADDED UPDATED LUFFING JIB SIGN 02-15-12 JMG ADDED ADDED NOTE
47	2	PIN	194143	
48	4	BOOM SUPPORT STRAP - 17 FT 5.75	194147	1-8-02 EDB ADDED 91 WAS 22656 10-17-05 KJB REPLACED 92-24-10 JAS 61 WAS A02375 HUKI ADDED UPDATED LUFFING JIB SIGN 02-15-12 JMG ADDED ADDED NOTE
49	2	BOOM SUPPORT STRAP - RH 2 FT 6.25	194148	
50	2	BOOM SUPPORT STRAP - LH 2 FT 6.25	194149	1-8-02 EDB ADDED 91 WAS 22656 10-17-05 KJB REPLACED 92-24-10 JAS 61 WAS A02375 HUKI ADDED UPDATED LUFFING JIB SIGN 02-15-12 JMG ADDED ADDED NOTE
51				
52	4	BOOM SUPPORT STRAP - 1 FT 8.00	194170	1-8-02 EDB ADDED 91 WAS 22656 10-17-05 KJB REPLACED 92-24-10 JAS 61 WAS A02375 HUKI ADDED UPDATED LUFFING JIB SIGN 02-15-12 JMG ADDED ADDED NOTE
53	2	BOOM SUPPORT STRAP - 27 FT 8.19	194171	
54	1	LOWER BOOM POINT ASSEMBLY FOR #81 BM.	194177	1-8-02 EDB ADDED 91 WAS 22656 10-17-05 KJB REPLACED 92-24-10 JAS 61 WAS A02375 HUKI ADDED UPDATED LUFFING JIB SIGN 02-15-12 JMG ADDED ADDED NOTE
55	2	PIN	194178	
56	2	PIN	194179	1-8-02 EDB ADDED 91 WAS 22656 10-17-05 KJB REPLACED 92-24-10 JAS 61 WAS A02375 HUKI ADDED UPDATED LUFFING JIB SIGN 02-15-12 JMG ADDED ADDED NOTE
57	2	COLLAR	194180	
58	32	SCR M8 X 30. 4.8 ZINC PLT	7121171301	1-8-02 EDB ADDED 91 WAS 22656 10-17-05 KJB REPLACED 92-24-10 JAS 61 WAS A02375 HUKI ADDED UPDATED LUFFING JIB SIGN 02-15-12 JMG ADDED ADDED NOTE
59	32	NUT HEX M8-1.25 10 PLN	7661170004	
60	32	WASHER LOCK M8	7951170210	1-8-02 EDB ADDED 91 WAS 22656 10-17-05 KJB REPLACED 92-24-10 JAS 61 WAS A02375 HUKI ADDED UPDATED LUFFING JIB SIGN 02-15-12 JMG ADDED ADDED NOTE
61				
62	8	PIN - SNAP	563803	1-8-02 EDB ADDED 91 WAS 22656 10-17-05 KJB REPLACED 92-24-10 JAS 61 WAS A02375 HUKI ADDED UPDATED LUFFING JIB SIGN 02-15-12 JMG ADDED ADDED NOTE
63				
64				1-8-02 EDB ADDED 91 WAS 22656 10-17-05 KJB REPLACED 92-24-10 JAS 61 WAS A02375 HUKI ADDED UPDATED LUFFING JIB SIGN 02-15-12 JMG ADDED ADDED NOTE
65				
9981-0010 20 FT INSERT #80 BM (6.10M)				1-8-02 EDB ADDED 91 WAS 22656 10-17-05 KJB REPLACED 92-24-10 JAS 61 WAS A02375 HUKI ADDED UPDATED LUFFING JIB SIGN 02-15-12 JMG ADDED ADDED NOTE
66	4	PIN	175160	
67	1	TIMBER	178905	1-8-02 EDB ADDED 91 WAS 22656 10-17-05 KJB REPLACED 92-24-10 JAS 61 WAS A02375 HUKI ADDED UPDATED LUFFING JIB SIGN 02-15-12 JMG ADDED ADDED NOTE
68				
69				1-8-02 EDB ADDED 91 WAS 22656 10-17-05 KJB REPLACED 92-24-10 JAS 61 WAS A02375 HUKI ADDED UPDATED LUFFING JIB SIGN 02-15-12 JMG ADDED ADDED NOTE
70	1	20 FT INSERT	192575 2	
71	4	PIN	192595	1-8-02 EDB ADDED 91 WAS 22656 10-17-05 KJB REPLACED 92-24-10 JAS 61 WAS A02375 HUKI ADDED UPDATED LUFFING JIB SIGN 02-15-12 JMG ADDED ADDED NOTE
72	4	COLLAR	192596	
73	4	BOOM SUPPORT STRAP - 1FT 8.00	192597	1-8-02 EDB ADDED 91 WAS 22656 10-17-05 KJB REPLACED 92-24-10 JAS 61 WAS A02375 HUKI ADDED UPDATED LUFFING JIB SIGN 02-15-12 JMG ADDED ADDED NOTE
74	2	BOOM SUPPORT STRAP - 20FT 0.00	192598	
75				1-8-02 EDB ADDED 91 WAS 22656 10-17-05 KJB REPLACED 92-24-10 JAS 61 WAS A02375 HUKI ADDED UPDATED LUFFING JIB SIGN 02-15-12 JMG ADDED ADDED NOTE
76	4	PIN	192603	
77				1-8-02 EDB ADDED 91 WAS 22656 10-17-05 KJB REPLACED 92-24-10 JAS 61 WAS A02375 HUKI ADDED UPDATED LUFFING JIB SIGN 02-15-12 JMG ADDED ADDED NOTE
78				
9981-0020 40 FT INSERT #80 BM (12.19M)				1-8-02 EDB ADDED 91 WAS 22656 10-17-05 KJB REPLACED 92-24-10 JAS 61 WAS A02375 HUKI ADDED UPDATED LUFFING JIB SIGN 02-15-12 JMG ADDED ADDED NOTE
79	4	PIN	175160	
80	2	TIMBER	178905	1-8-02 EDB ADDED 91 WAS 22656 10-17-05 KJB REPLACED 92-24-10 JAS 61 WAS A02375 HUKI ADDED UPDATED LUFFING JIB SIGN 02-15-12 JMG ADDED ADDED NOTE
81				
82				1-8-02 EDB ADDED 91 WAS 22656 10-17-05 KJB REPLACED 92-24-10 JAS 61 WAS A02375 HUKI ADDED UPDATED LUFFING JIB SIGN 02-15-12 JMG ADDED ADDED NOTE
83	1	40 FT INSERT	192576 2	
84	4	PIN	192595	1-8-02 EDB ADDED 91 WAS 22656 10-17-05 KJB REPLACED 92-24-10 JAS 61 WAS A02375 HUKI ADDED UPDATED LUFFING JIB SIGN 02-15-12 JMG ADDED ADDED NOTE
85	4	COLLAR	192596	
86	4	BOOM SUPPORT STRAP - 1FT 8.00	192597	1-8-02 EDB ADDED 91 WAS 22656 10-17-05