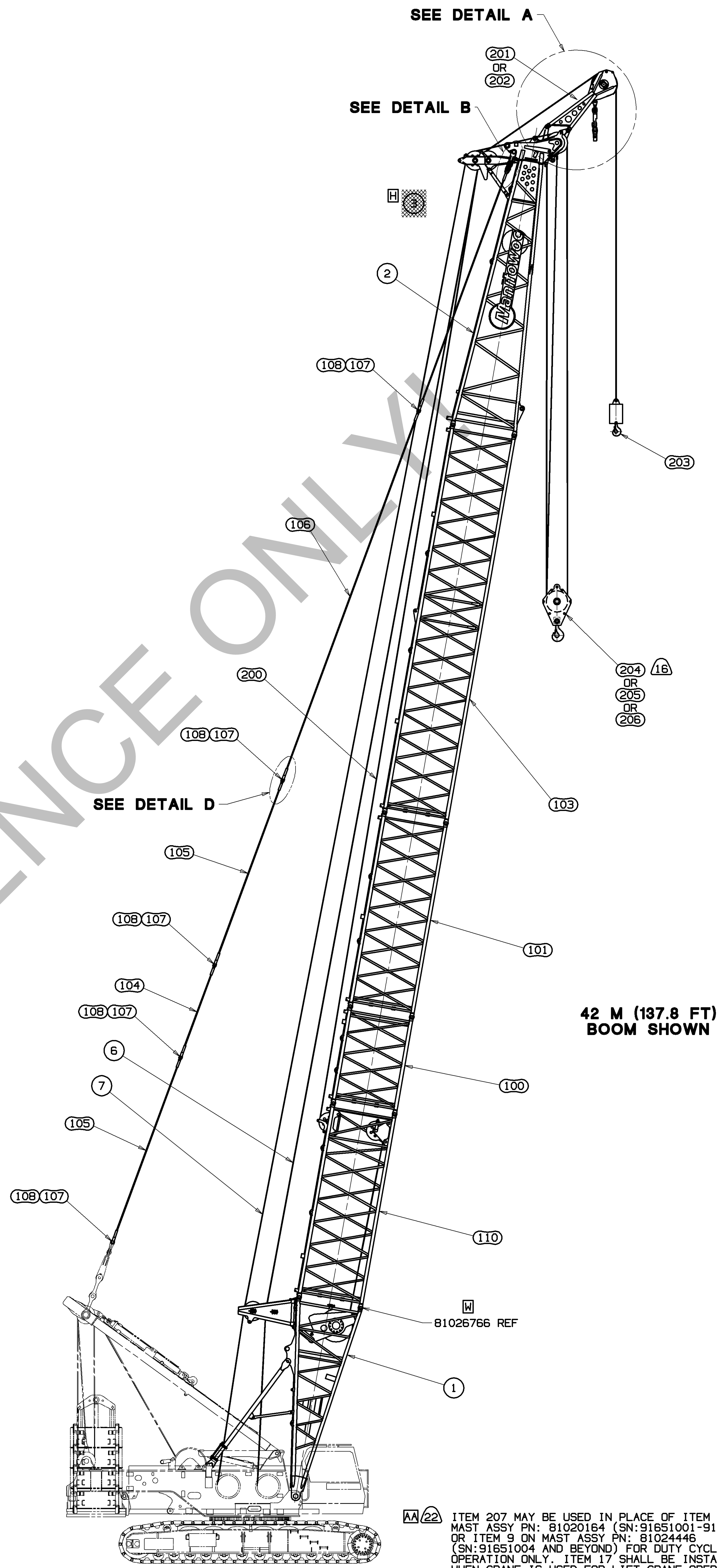
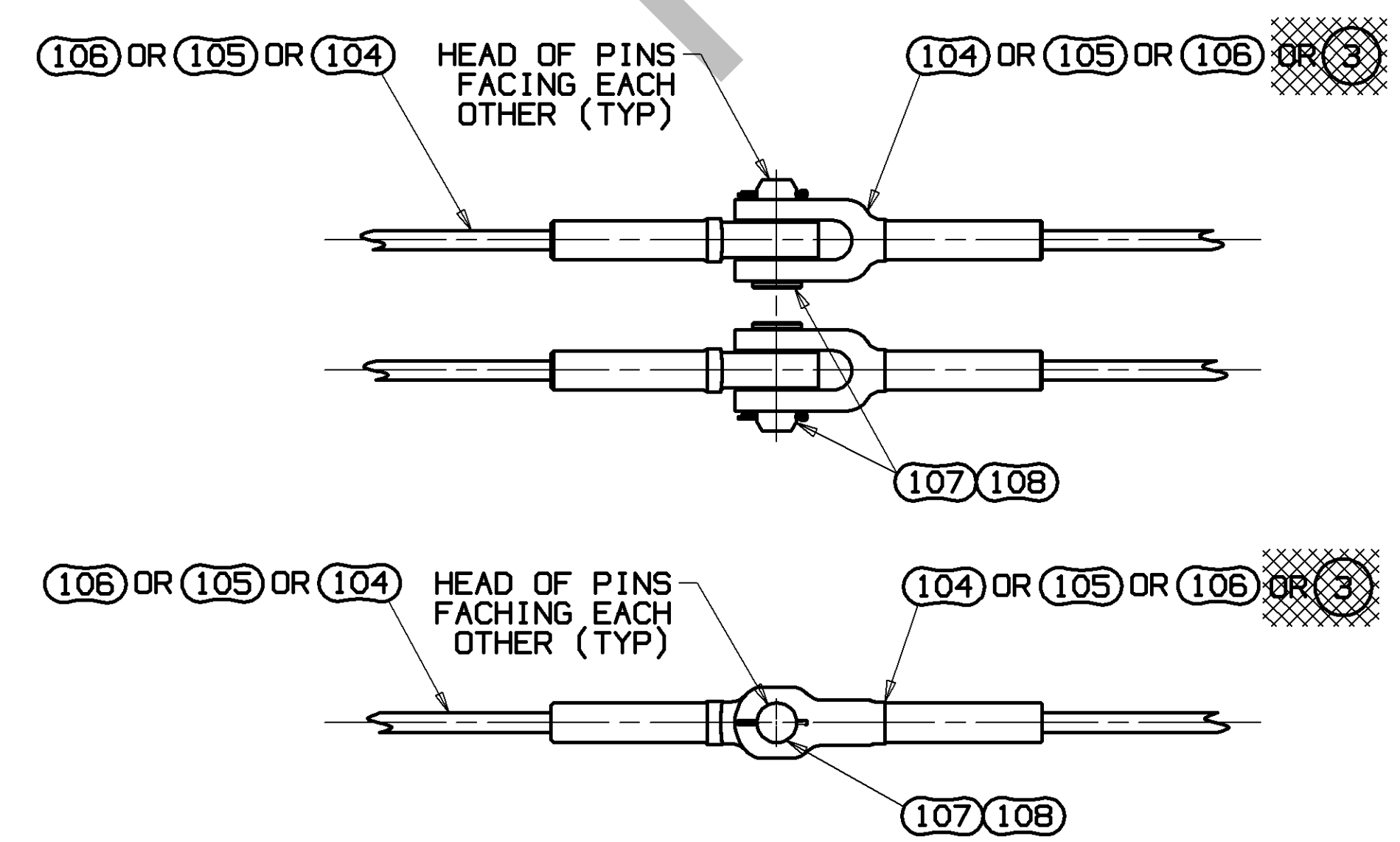
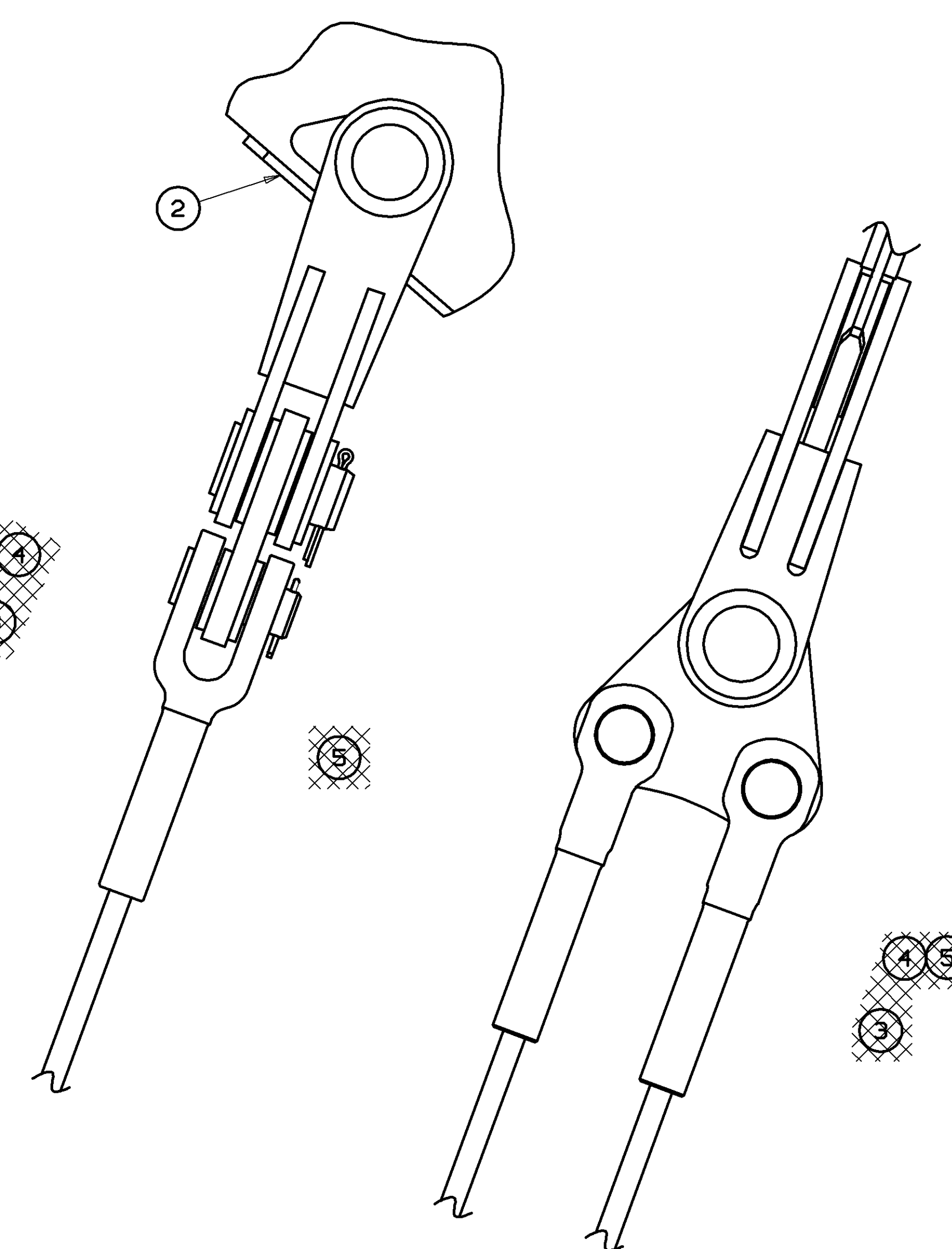


REQ'D. FOR VARIOUS BOOM LENGTHS

ITEM NO.	110	100	101	102	103	104	105	106	107	108	109
BOOM LENGTH	INSERT 6.00M (19.7 FT) W/SHEAVES ASSY	INSERT 3.00M (9.8 FT) ASSY	INSERT 6.00M (19.7 FT) ASSY	INSERT 12.00M (39.4 FT) ASSY	INSERT 12.00M (39.4 FT) W/BACKSTAY ASSY	PENDANT 3.009 M (9.9 FT)	PENDANT 6.022 M (19.8 FT)	PENDANT 12.046 M (39.5 FT)	PIN 1 HOLE W/HD 2.25 DIA X 4.80 LG	COTTER PIN .38 DIA X 3.50 LG	INTERMEDIATE STRUT SEE ①
METERS	FEET										
15	49.2	0	0	0	0	0	0	0	4	4	0
18	59.1	0	1	0	0	0	0	0	8	8	0
21	68.9	OR 1	0	0	0	0	0	0	4	8	0
24	78.7	OR 1	1	0	0	0	0	0	4	12	0
27	88.6	OR 1	0	0	0	0	0	0	4	8	0
30	98.4	OR 1	1	0	0	0	0	0	4	12	0
33	108.3	OR 1	0	0	0	0	0	0	4	12	0
36	118.3	OR 1	1	0	0	0	0	0	4	16	0
39	128.0	OR 1	0	0	0	0	0	0	8	12	0
42	137.8	OR 1	1	0	0	0	0	0	8	16	0
45	147.6	OR 1	0	0	0	0	0	0	8	16	0
48	157.5	OR 1	1	0	0	0	0	0	8	20	0
51	167.3	OR 1	0	0	0	0	0	0	8	20	0
54	177.2	OR 1	1	0	0	0	0	0	8	24	0
57	187.0	OR 1	0	0	0	0	0	0	8	20	0
60	196.9	OR 1	1	0	0	0	0	0	8	24	0
63	206.7	OR 1	0	0	0	0	0	0	8	24	0
66	216.5	OR 1	1	0	0	0	0	0	8	28	0
69	226.4	OR 1	0	0	0	0	0	0	8	24	0
72	236.2	OR 1	1	0	0	0	0	0	8	28	1
75	246.1	OR 1	0	0	0	0	0	0	8	28	1
78	255.9	OR 1	1	0	0	0	0	0	8	32	1
81	265.7	OR 1	0	0	0	0	0	0	8	32	1
84	275.6	OR 1	1	0	0	0	0	0	8	36	1



SEE DETAIL A

SEE DETAIL B

SEE DETAIL D

42 M (137.8 FT) BOOM SHOWN

ITEM NO.	DESCRIPTION	QUANTITY	MATERIAL	UNIT	ASSEMBLY NO.
1	BUTT ASSY #74, 6.00M	1	81019796	5	81019792
2	TOP ASSY #74, 9.00M	1	81019934	6	
3	PENDANT 28.0 MM DIA X 8.0 M LG	1	81021504		
4	PIN 1 HOLE W/HD 2.25 DIA X 4.80 LG	1	177303		
5	COTTER PIN .38 DIA X 3.50 LG	1	562151		
6	WIRE ROPE ROTATION RESIST 26MM X 310 M	1	81020875		
7	WIRE ROPE ROTATION RESIST 26MM X 380 M W/BUTTON	1	81020874		
8	SHIM 1.5 MM THK	1	81025493		
9	SHIM 3.0 MM THK	1	81025492		
10					
11					
12					

OPTIONAL PARTS

200	1	WIRE ROPE ROTATION RESIST 26MM X 210 M	81020876
201	1	BOOM POINT UPPER ASSEMBLY	170419
202	1	BOOM POINT UPPER ASSEMBLY	A08493
203	1	HOOK & WEIGHT BALL 13.6 T	218214
204	1	BLOCK HOOK 75US TON SINGLE HOOK	A10622
205	1	BLOCK HOOK 100US TON SINGLE HOOK	237099
206	1	BLOCK HOOK 200M TON SINGLE HOOK	237082
207	2	PIN KEEPER 72.0 DIA X 104.0 LG	81035498

- ① 72 M (236.2 FT), 75 M (246.1 FT), 78 M (255.9 FT), 81 M (265.7 FT), AND 84 M (275.6 FT) BOOM REQUIRES INTERMEDIATE STRUT ITEM 109. (SEE SHEETS 5.6, AND 8)
- ② MAXIMUM NUMBER OF 3 METER INSERTS = 1
- ③ FOR BOOM LENGTHS 21M THROUGH 78M, MAXIMUM NUMBER OF 6 METER INSERTS = 2. FOR BOOM LENGTHS 81M AND 84M, MAXIMUM NUMBER OF 6 METER INSERTS = 3.
- ④ MAXIMUM NUMBER OF 12 METER INSERTS = 5
- ⑤ BUTT 6.00M WELDMENT I.D. TAG #81019855
- ⑥ TOP 9.00M WELDMENT I.D. TAG #81020300
- ⑦ INSERT 3.00M WELDMENT I.D. TAG #81020295
- ⑧ INSERT 6.00M WELDMENT I.D. TAG #81020299
- ⑨ INSERT 12.00M WELDMENT I.D. TAG #81020116
- ⑩ INSERT 12.00M W/BACKSTAY LUG WELDMENT I.D. TAG #81020297
- ⑪ INSERT 6.00M W/SHEAVES I.D. TAG #81020293
- ⑫ 12 METER INSERT W/OUT BACKSTAY LUGS (ITEM 102) CAN BE USED IN PLACE OF 12 METER INSERT W/BACKSTAY LUGS (ITEM 103)
- ⑬ 6 METER INSERT W/OUT SHEAVES (ITEM 101) CAN BE USED IN PLACE OF 6 METER INSERT W/SHEAVES (ITEM 110)
- ⑭ 12 METER INSERT W/BACKSTAY LUGS (ITEM 103) MUST BE ASSEMBLED ADJACENT TO BOOM TOP
- ⑮ 6 METER INSERT W/SHEAVES (ITEM 110) MUST BE ASSEMBLED ADJACENT TO BOOM BUTT
- ⑯ FOR BLOCK REEVING SEE 81022907
- ⑰ STARTING WITH THE BOOM BUTT OR 6M INSERT W/SHEAVES INSERTS MUST BE INSTALLED IN ASCENDING LENGTH AS SHOWN ON SHEETS 2 THRU 6
- ⑱ ITEMS 107 AND 108 QUANTITIES INCLUDE ITEMS THAT ARE STORED WHEN INTERMEDIATE STRUT IS USED. (SEE SHEET 8)

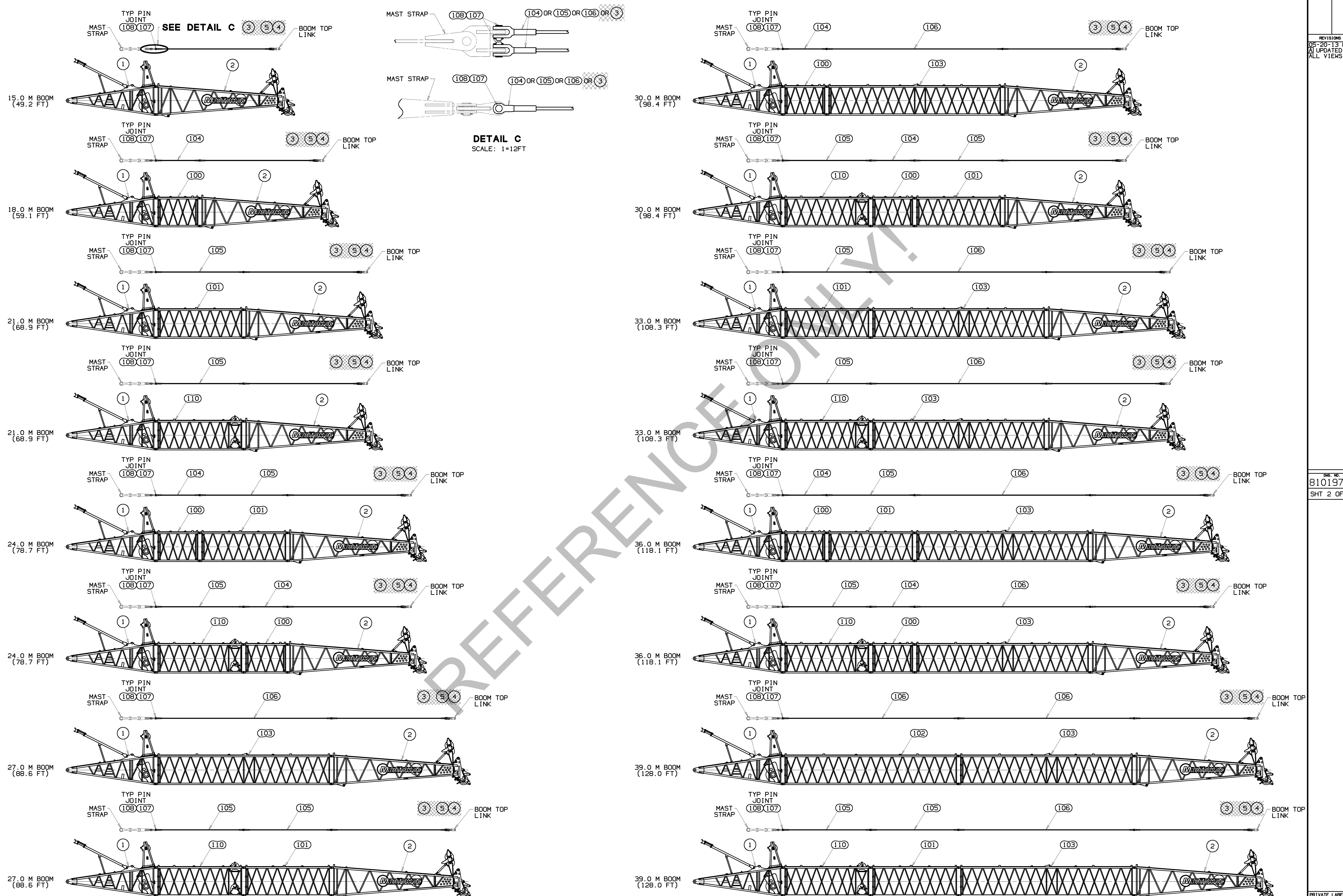
BOOM SECTION ASSY	OPTIONAL CAT WALK ASSY
81019934	81020728
81019796	81020598
81020294	81020627
81020298	81020507
81020296	81020708
81020292	81020592
81021115	81020706

CURRENT PART NUMBER	ALTERNATIVE PART NUMBER
81021501	83009910
81021502	83009911
81021503	83009912
81021504	83009913

- ⑳ ALTERNATIVE PENDANT PART NUMBERS
- ㉑ ITEM 207 MAY BE USED IN PLACE OF ITEM 17 ON MAST ASSY PN: 81020164 (SN:91651001-91651003) OR ITEM 9 ON MAST ASSY PN: 81024446 (SN:91651004 AND BEYOND) FOR DUTY CYCLE OPERATION ONLY. ITEM 17 SHALL BE INSTALLED WHEN CRANE IS USED FOR LIFT CRANE OPERATION.
- ㉒ 3 SHEAVE CONFIGURATION IN MAIN BOOM TOP IS TO BE USED WHEN THE MAIN BOOM COMBINATION EQUALS 63 METERS OR GREATER. WHEN ONLY 3 SHEAVES ARE REQUIRED REPLACE THE OUTSIDE SHEAVE CLUSTERS WITH SPACERS AS SHOWN ON DRAWING 81021665.

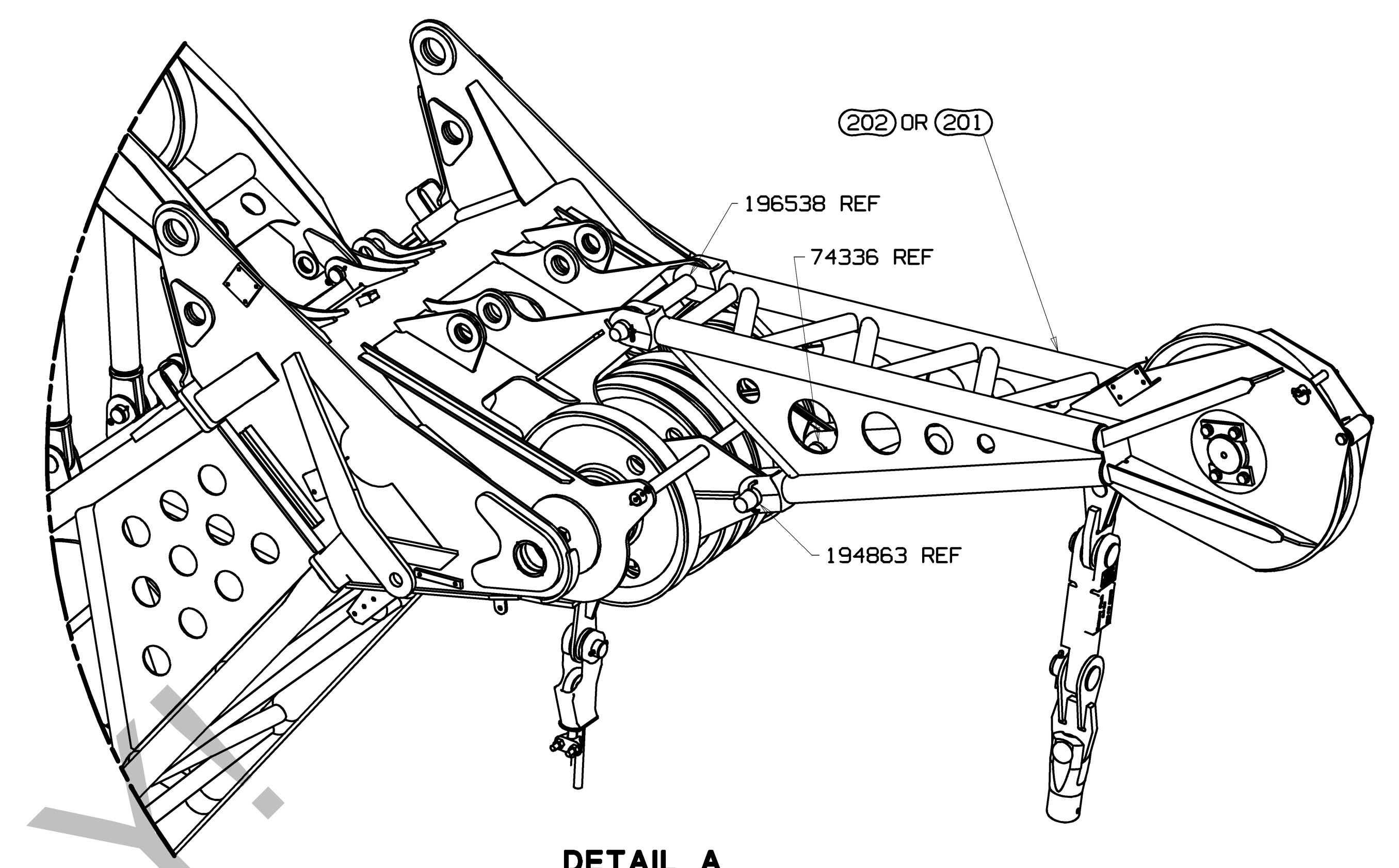
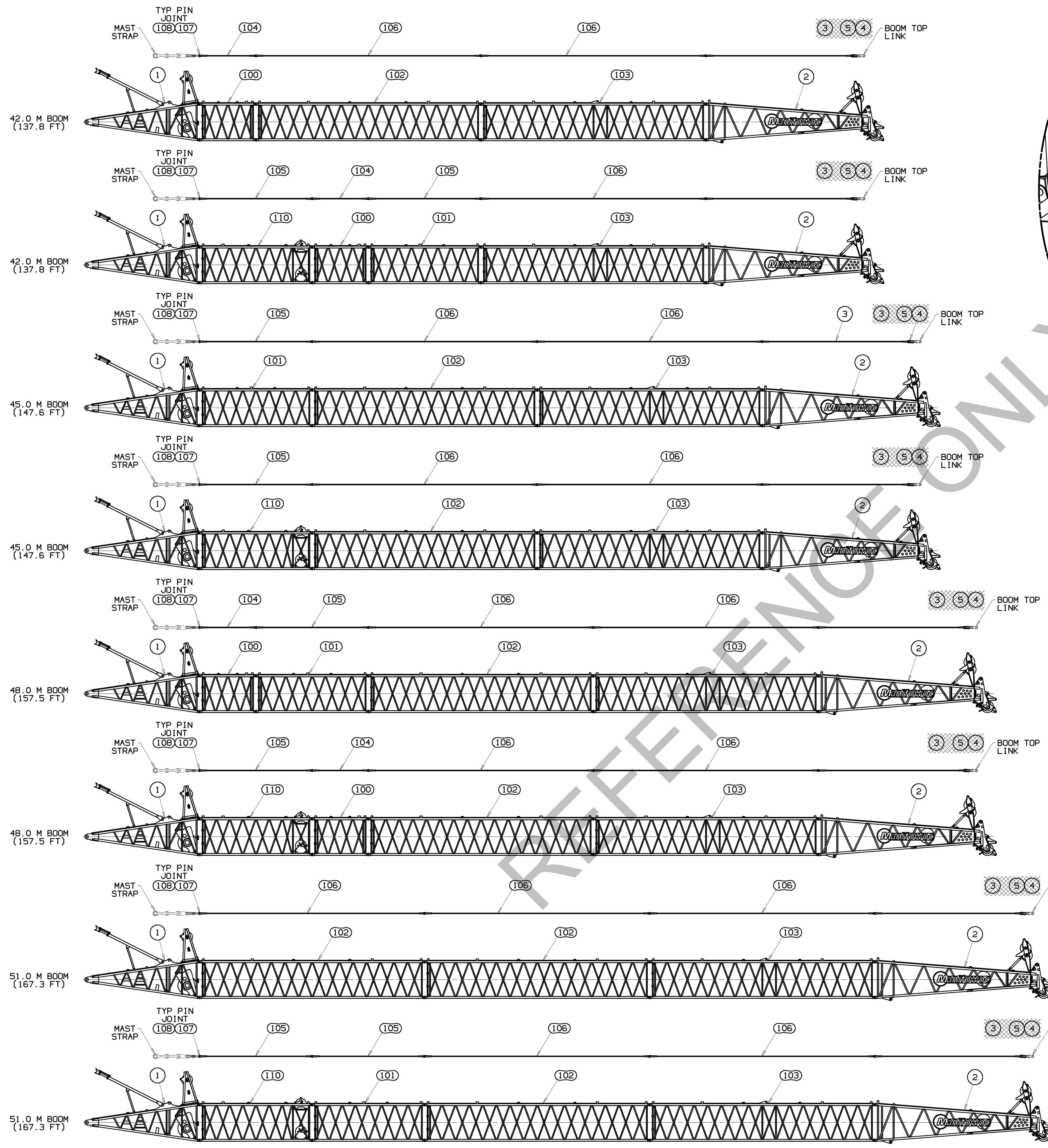
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DATE	11-16-12
DRAWN BY	CDK
CHECKED BY	MER
APPROVED BY	PMP
TITLE	BOOM ASSY #74
SCALE	AS SHOWN

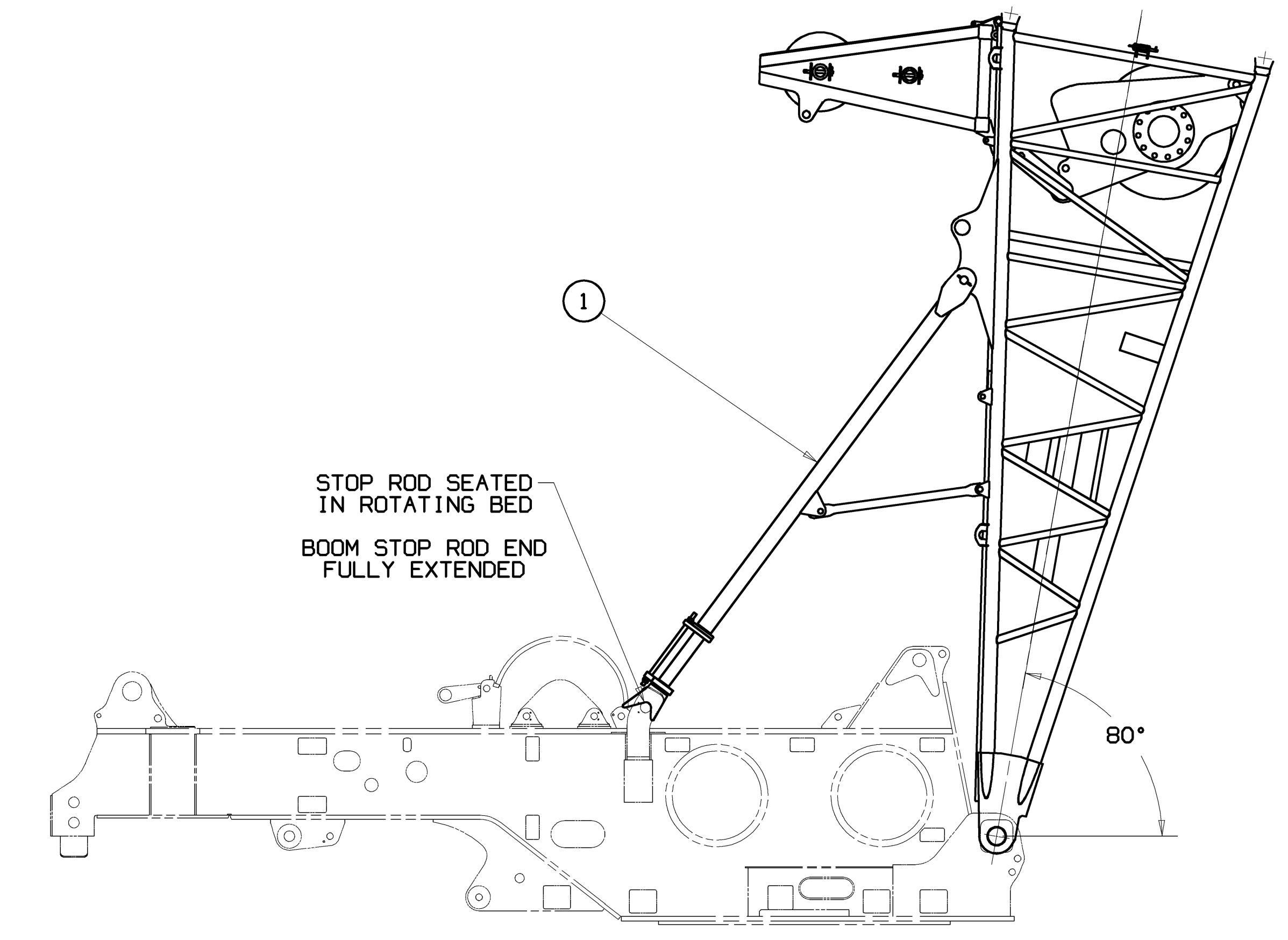


81019793
 SHT 2 OF 8

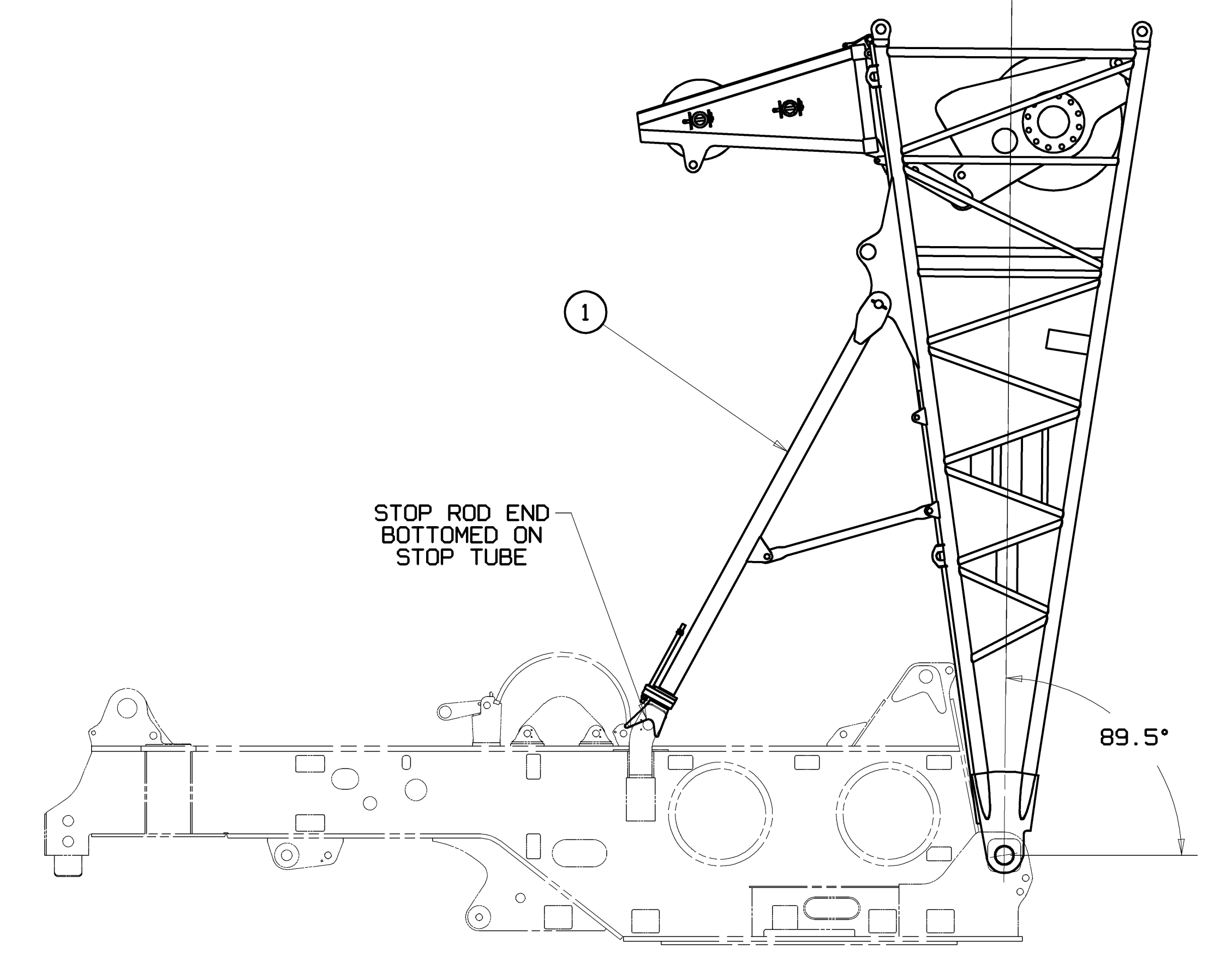
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	DECIMAL PLACES	FABRICATION			MACHINING
	(1) PLACE 0.0	± 0.12			± 0.18
	(2) PLACE 0.00	± 0.08			± 0.12
(3) PLACE 0.000	± 0.05	± 0.08			
ANGLES	± 1.0	± 0.5			



DETAIL A
 SCALE: 1=1FT

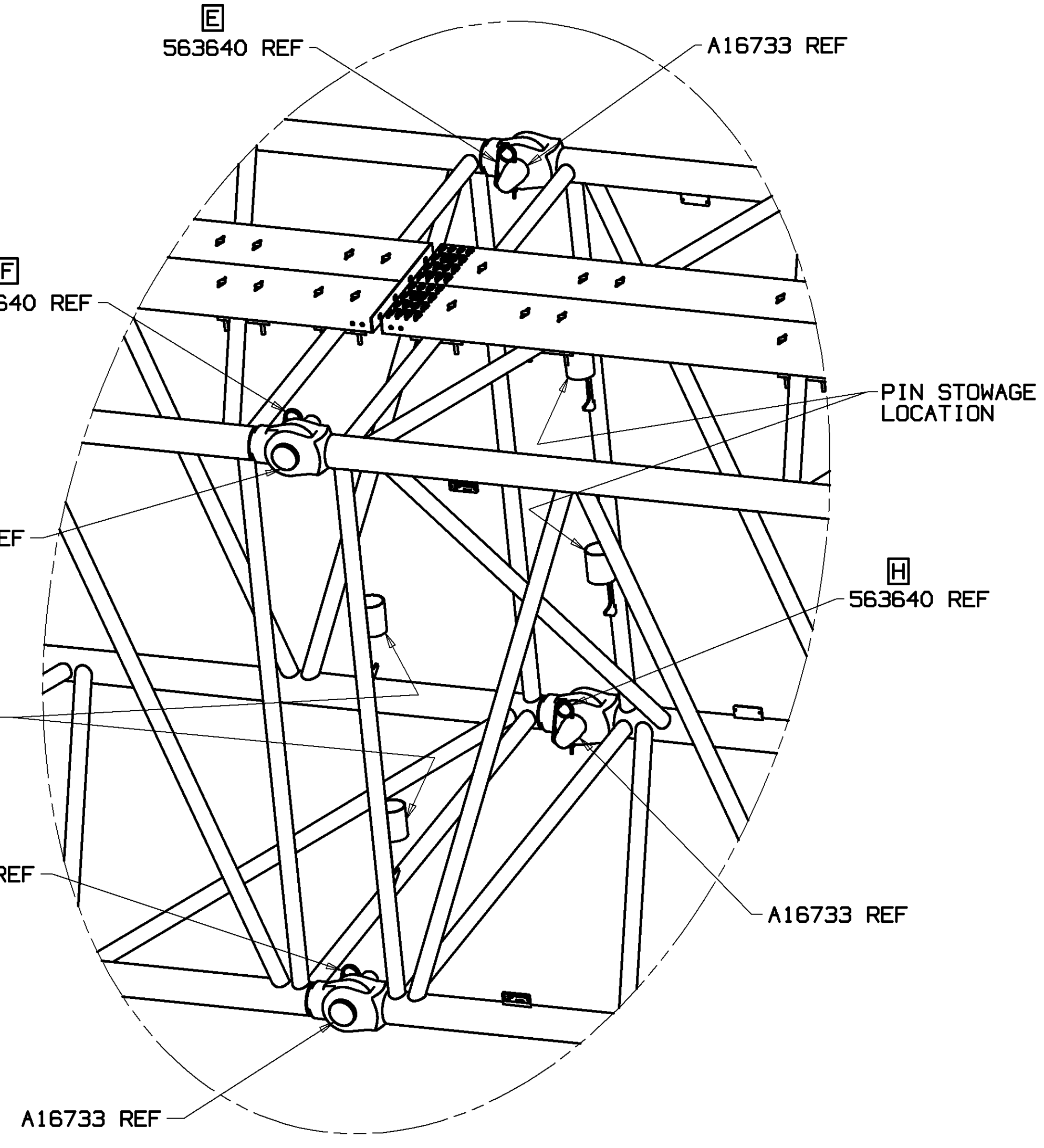
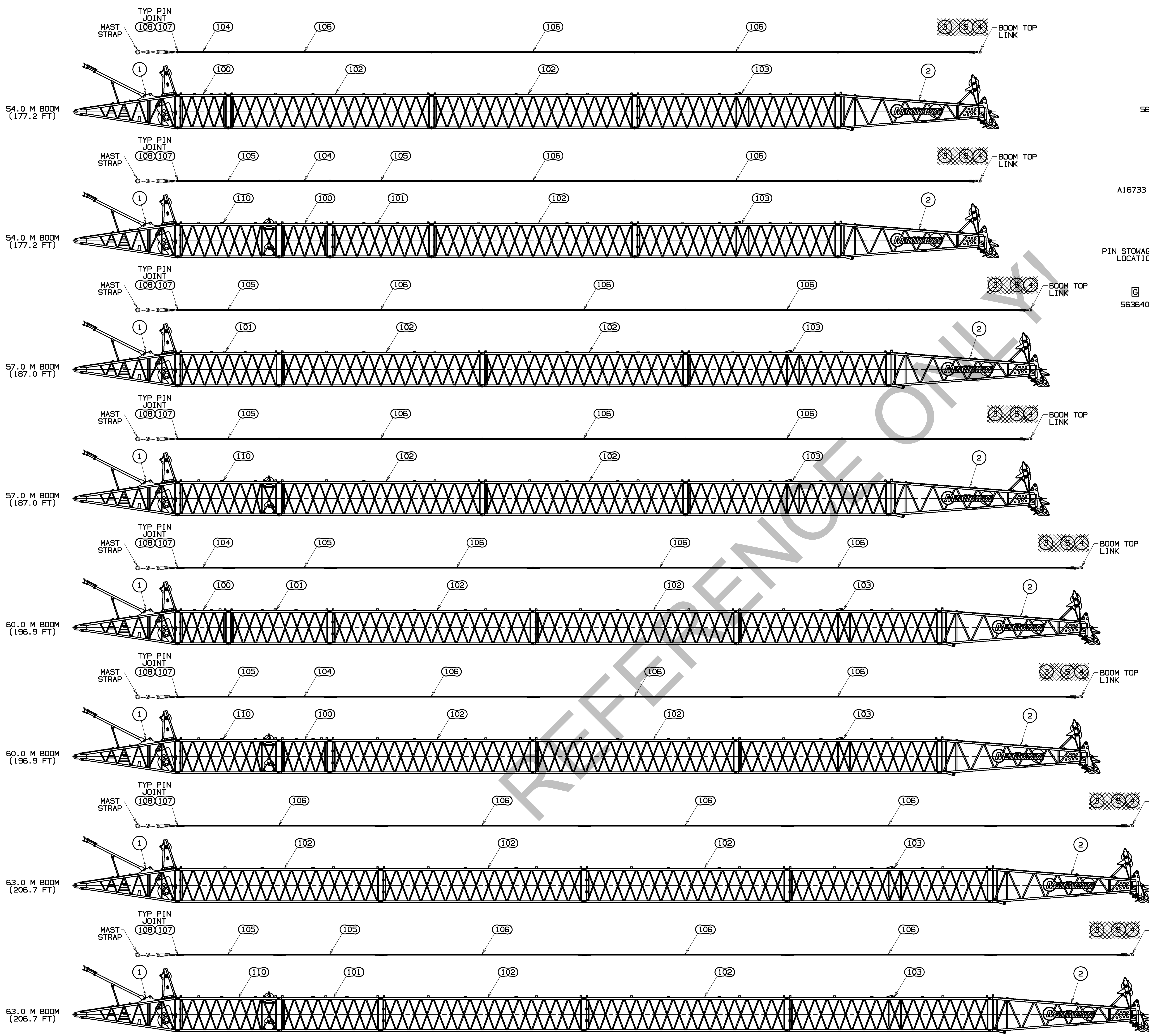


**BOOM STOP
 START OF CUSHION**
 SCALE: 0.4=1FT

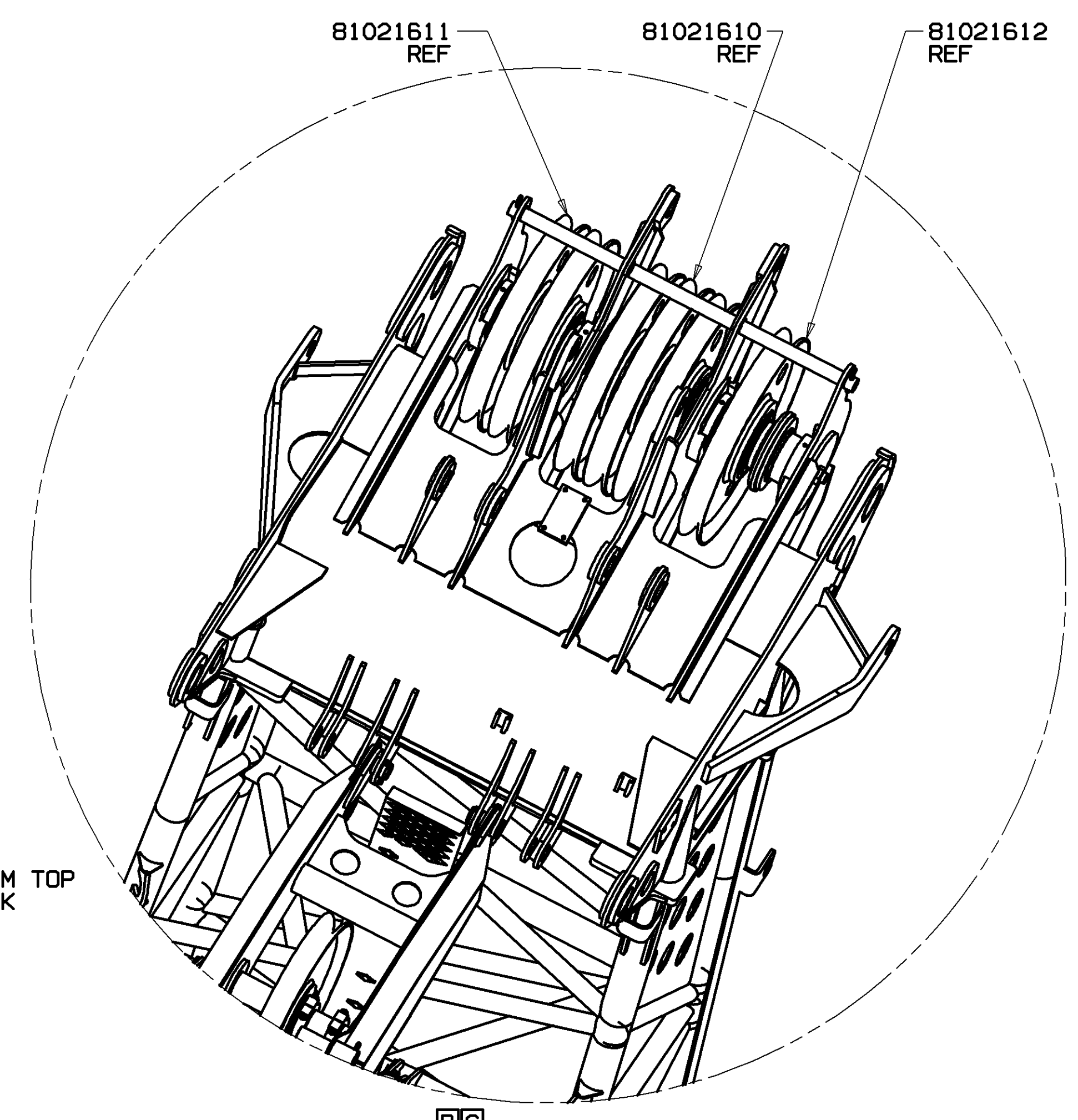


**BOOM STOP
 PHYSICAL STOP**
 SCALE: 0.4=1FT

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DATE 11-16-12		PATTERN NO.		DWG. NO. 81019793		SHT 3 OF 8		PRIVATE LABELING REQUIREMENT TO CONFORM TO ENGINEERING SPECIFICATION 6829103794 FOR COMPONENTS LISTED IN SECTION 05-026	



TYPICAL BOOM JOINT PIN
SCALE: 1=12FT



TYPICAL BOOM TOP LOAD HOIST SHEAVE GROUPS CONFIGURATION
SCALE: 1=1FT

REVISIONS

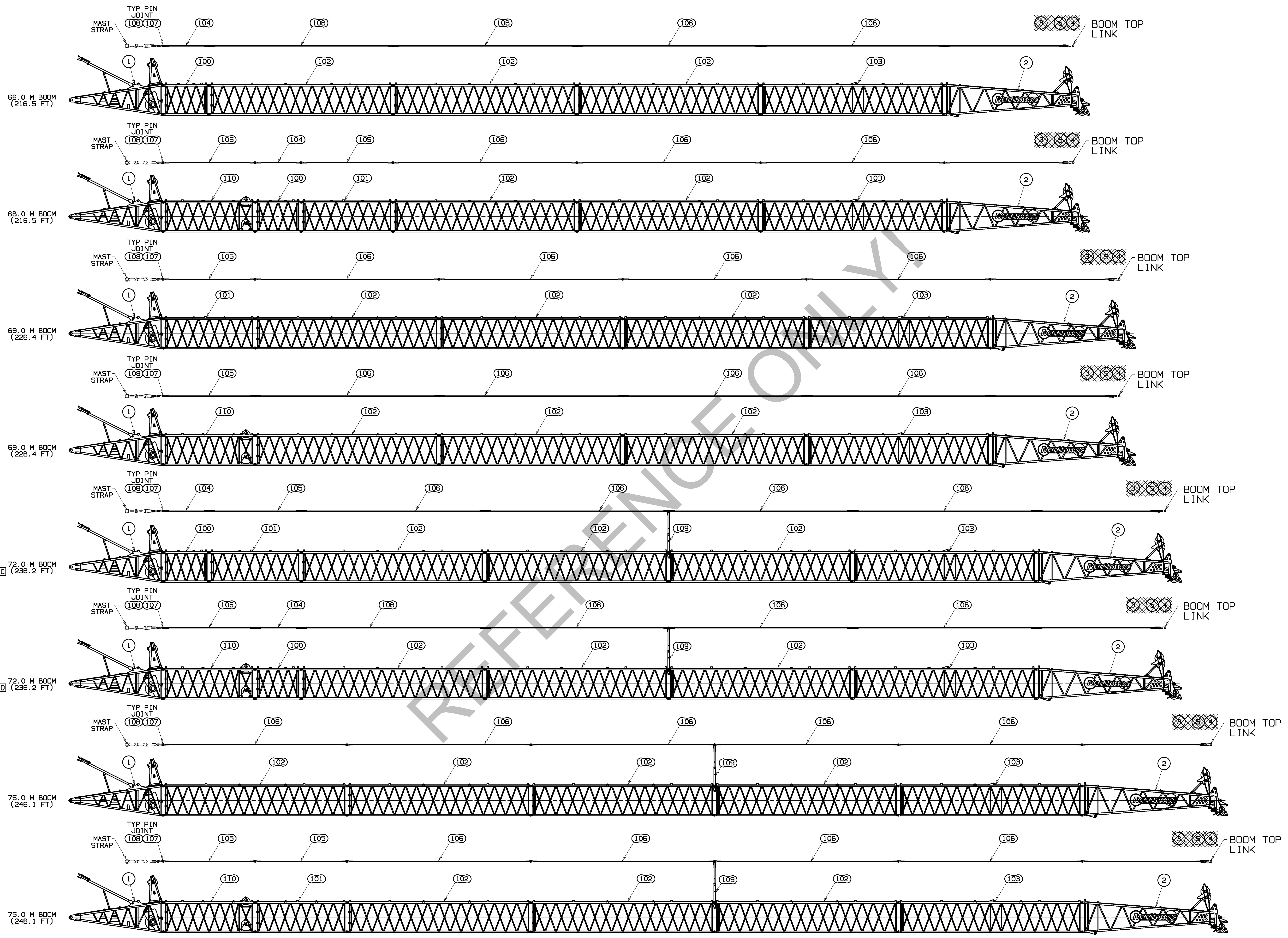
NO.	DESCRIPTION
05-07-13	MER
A	UPDATED MAIN VIEWS
B	UPDATED VIEW
06-17-13	MER
C	MOVED VIEW TO SHT. 1
D	ADDED VIEW
12-05-13	RHV
E	FIG. 1 WAS 562151

81019793
SHT 4 OF 8

PRIVATE LABELING REQUIREMENT TO CONFORM TO ENGINEERING SPECIFICATION 8629103794 FOR COMPONENTS LISTED IN SECTION 05-05-056
DATE 11-16-12
PATTERN NO.

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DECIMAL PLACES	FRACTIONS	ANGLE	± 0.00	± 0.12	± 0.18	± 0.05	± 0.05	± 0.05	± 0.05	± 0.05	± 0.05	± 0.05	± 0.05	± 0.05	± 0.05
(1) PLACE 0.0	(2) PLACE 0.00	(3) PLACE 0.000	ANGLES	± 1.0°	± 1.5°	± 0.05	± 0.05	± 0.05	± 0.05	± 0.05	± 0.05	± 0.05	± 0.05	± 0.05	± 0.05
81019793		81019793		81019793		81019793		81019793		81019793		81019793		81019793	

REVISIONS
 05-07-13 MER
 A) UPDATED
 MAIN VIEWS
 06-17-13 MER
 B) ADDED NOTE
 12-05-13 RHV
 C) WAS
 (283.2 FT)



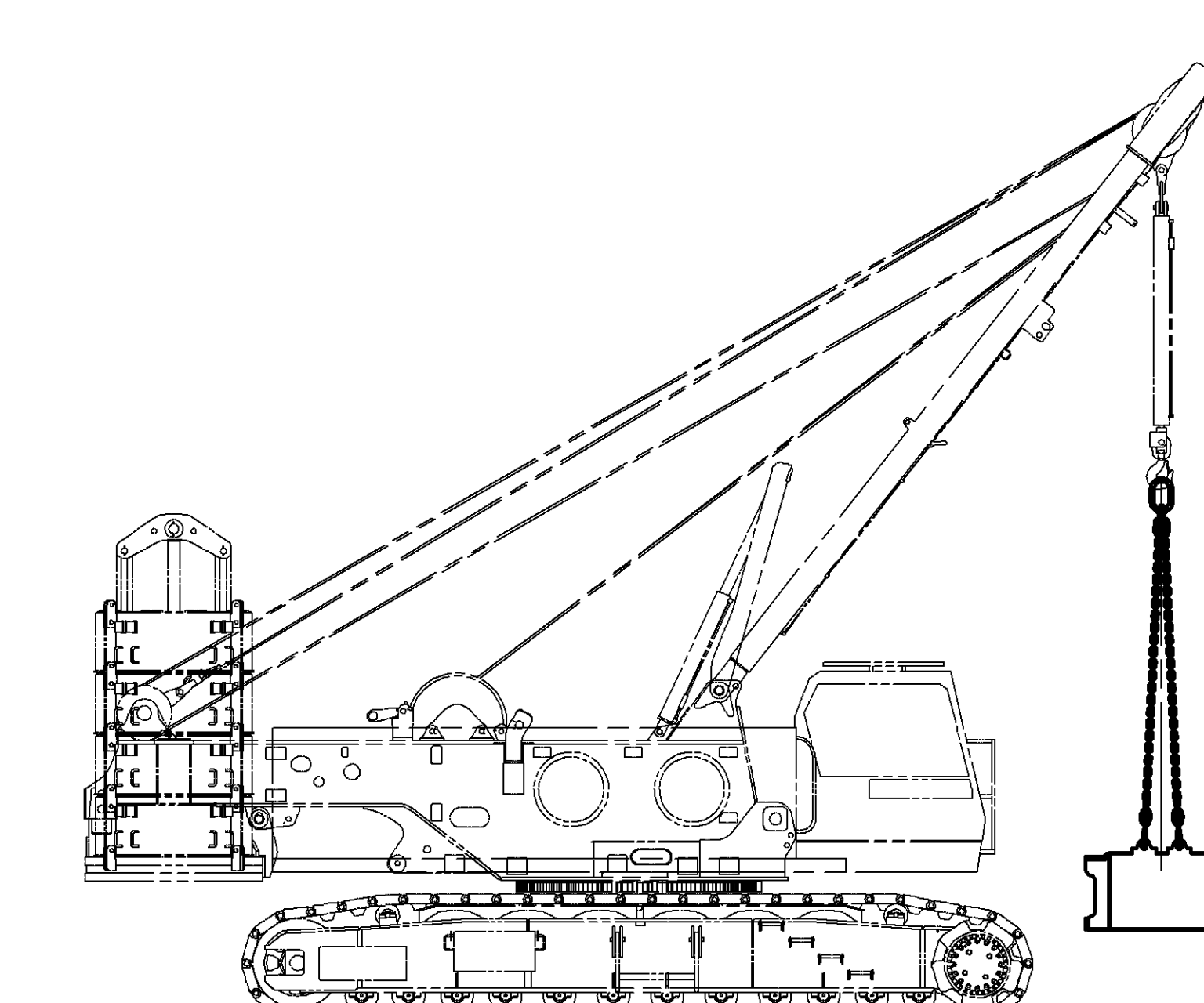
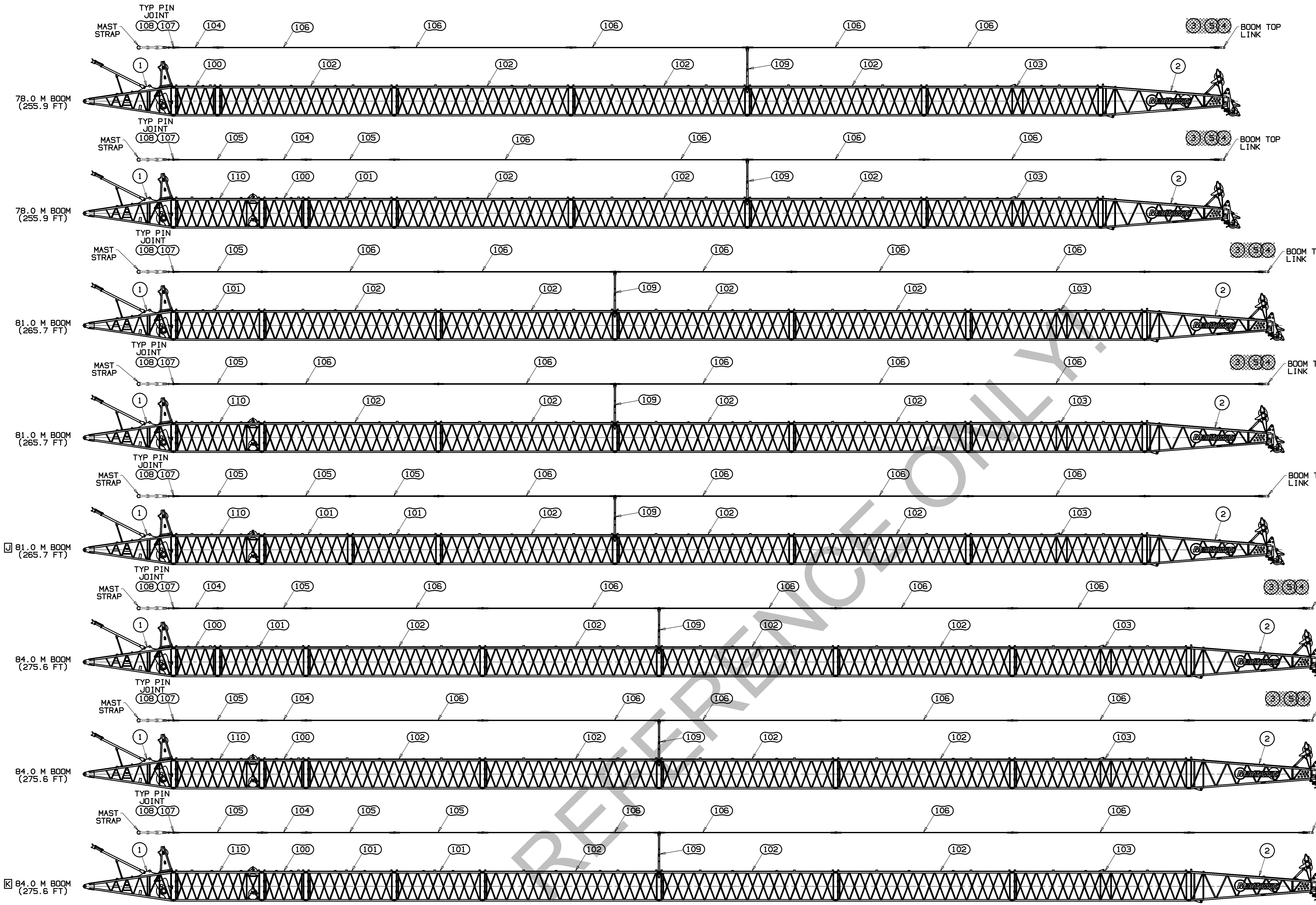
RECOMMENDED BOOM MAKEUP

THIS DRAWING IS THE PROPERTY OF HANSON CRANES, INC. ALL INFORMATION CONTAINED HEREIN IS CONFIDENTIAL IT IS LOANED, SUBJECT TO RETURN UPON DEMAND, AND ON EXPRESS CONDITION THAT IT IS NOT TO BE COPIED OR USED DIRECTLY OR INDIRECTLY IN ANY MANNER DETRIMENTAL TO OUR INTERESTS.	TOLERANCE UNLESS OTHERWISE SPECIFIED DECIMAL PLACES FRACTIONATION		DATE 11-16-12 PATTERN NO.
	.125 ± .005 .250 ± .010 .375 ± .015 .500 ± .020 .750 ± .030 1.000 ± .040 1.500 ± .060 2.000 ± .080 3.000 ± .120 4.000 ± .160 5.000 ± .200 7.000 ± .280 10.000 ± .380 15.000 ± .500 20.000 ± .640 30.000 ± .960 40.000 ± 1.280 50.000 ± 1.600 75.000 ± 2.400 100.000 ± 3.200 150.000 ± 4.800 200.000 ± 6.400 300.000 ± 9.600 400.000 ± 12.800 500.000 ± 16.000 750.000 ± 24.000 1000.000 ± 32.000	DR. CDC DR. MER APP. PMP	
	HANSON CRANES, INC. Manitowish, Wisconsin MODEL MLC165		

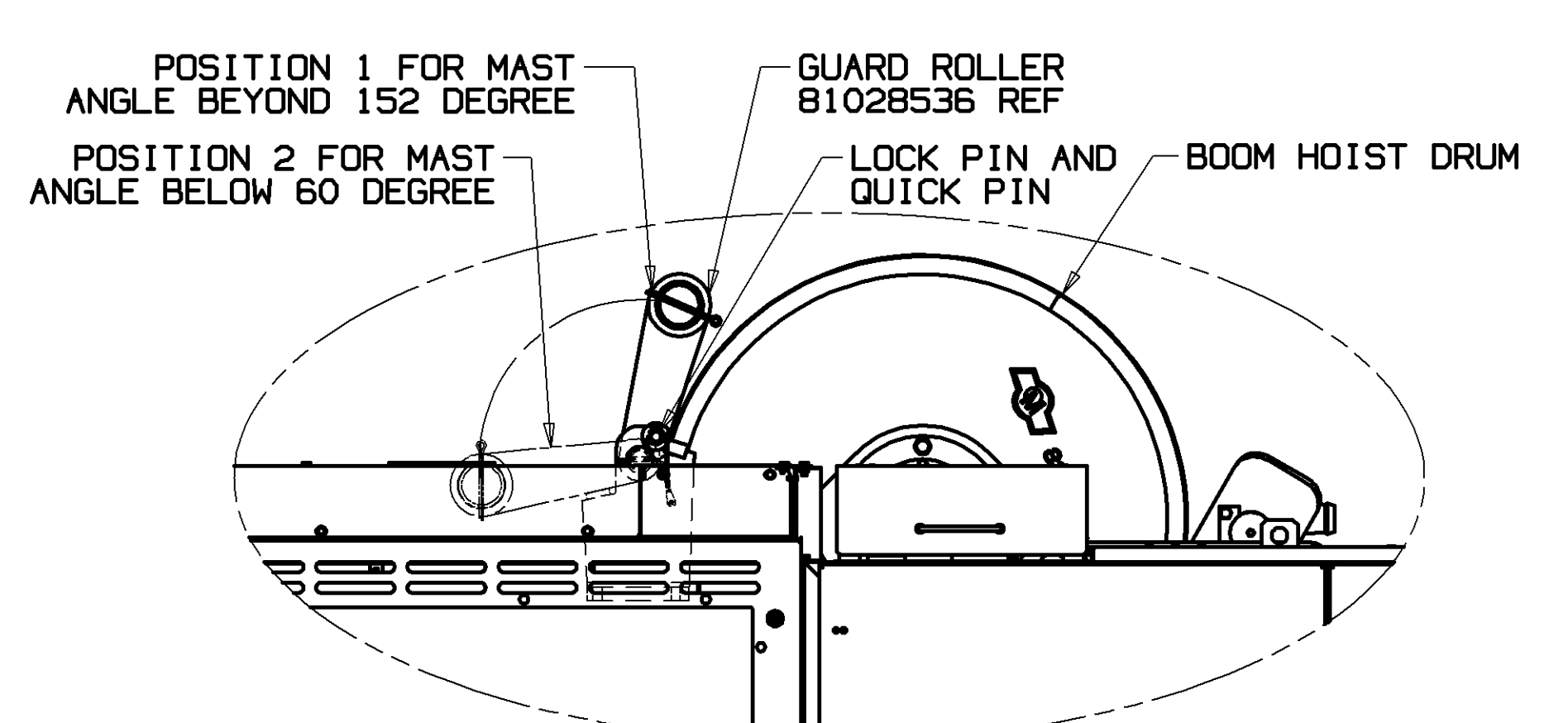
PRIVATE LABELING
 REQUIREMENT TO
 CONFORM TO
 ENGINEERING
 SPECIFICATION
 S22103794 FOR
 COMPONENTS LISTED
 IN SECTION 05-036
 DATE 11-16-12
 PATTERN NO.

REVISIONS

05-07-13 MER
 A) UPDATED
 MAIN VIEWS
 B) ADDED NOTE
 06-17-13 MER
 C) UPDATED
 VIEW
 D) VIEW MOVED
 TO SHT. 7
 E) TABLE MOVED
 TO SHT. 7
 F) ADDED
 VIEW
 12-05-13 RHV
 G) ADDED
 VIEW



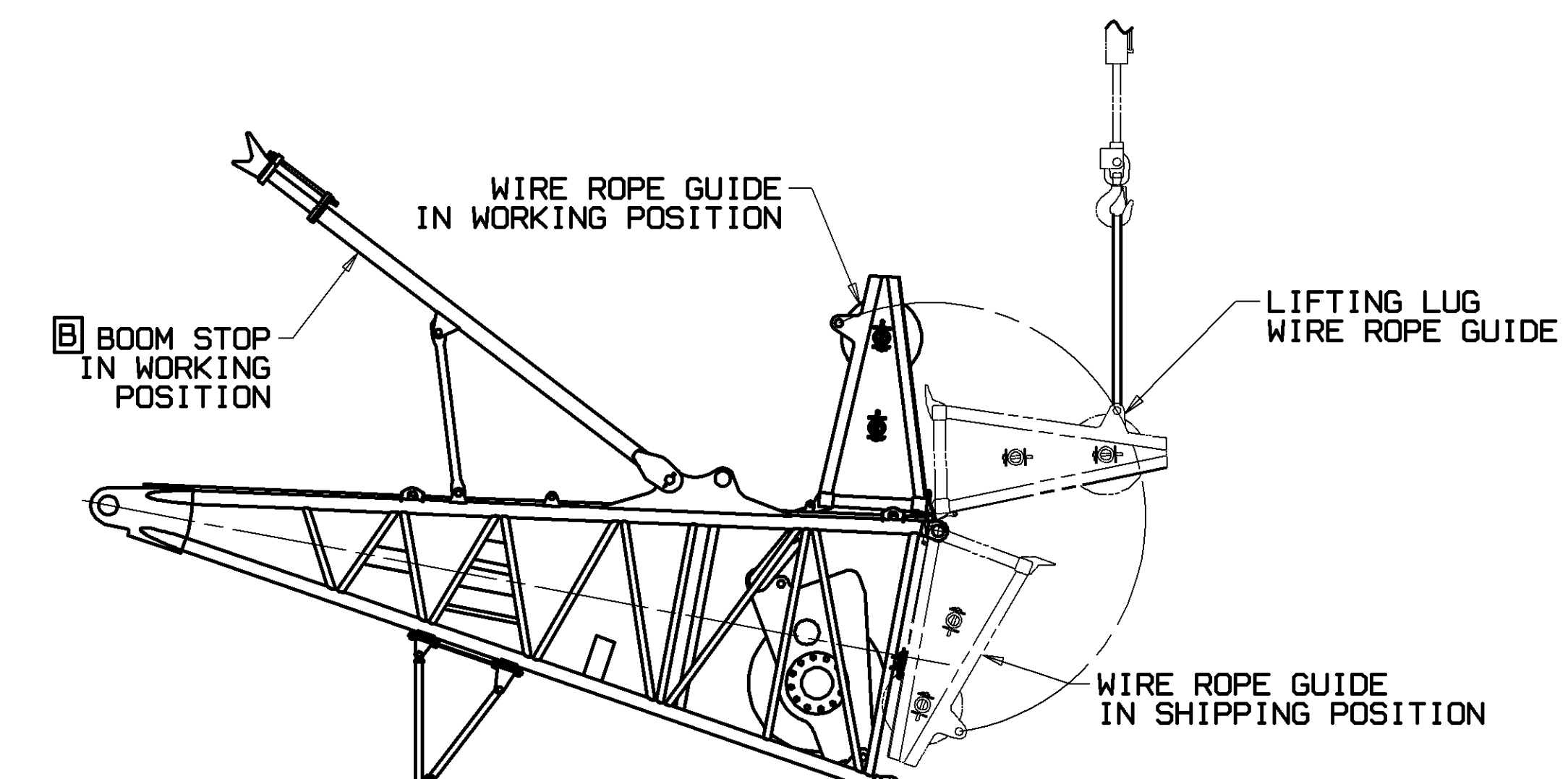
F CARBODY COUNTERWEIGHT ATTACHMENT
 SCALE: 0.20=1FT



G GUARD ROLLER DIRECTION
 SCALE: 1=1FT



H CRAWLER LIFTING ARRANGEMENT
 SCALE: 0.35=1FT



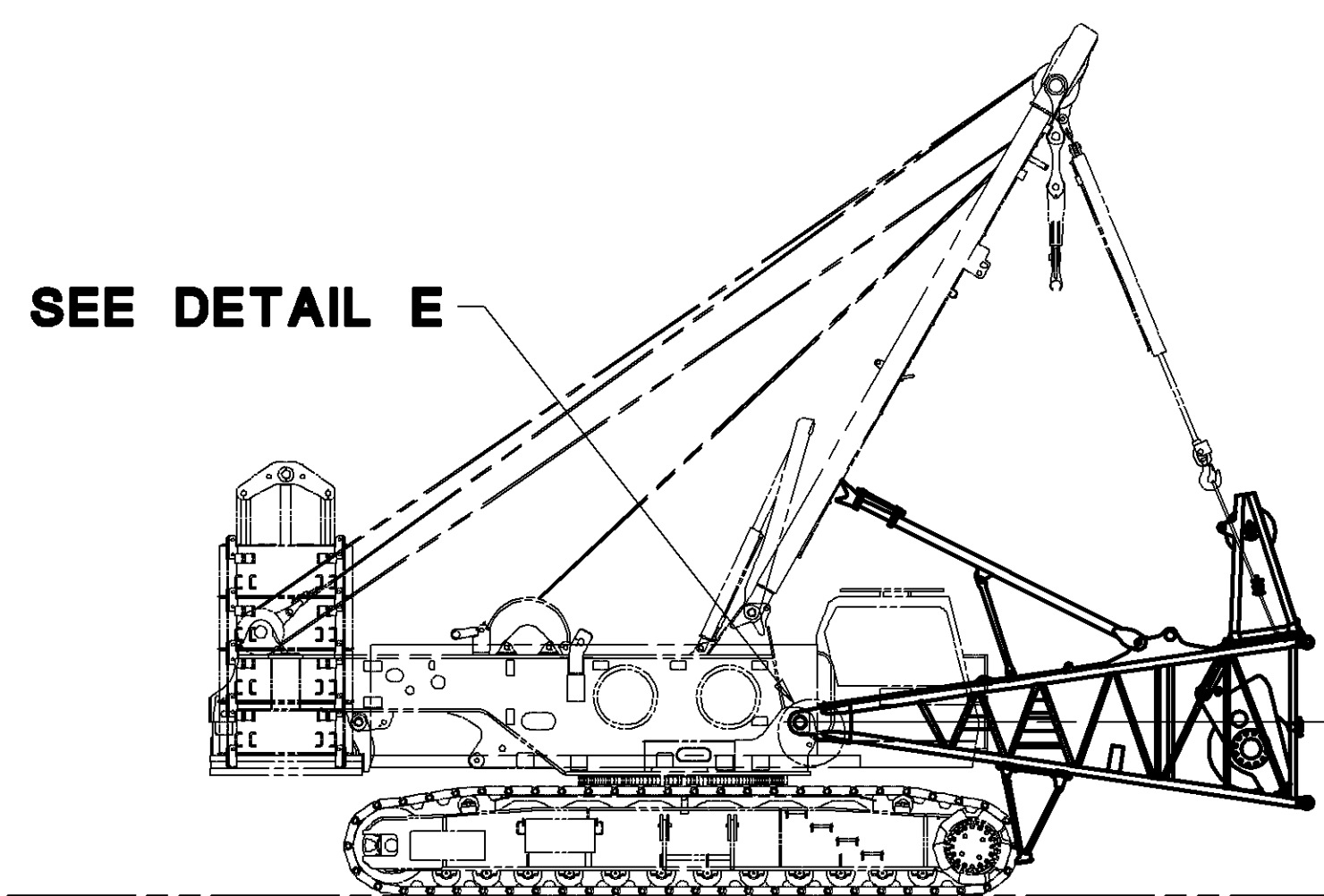
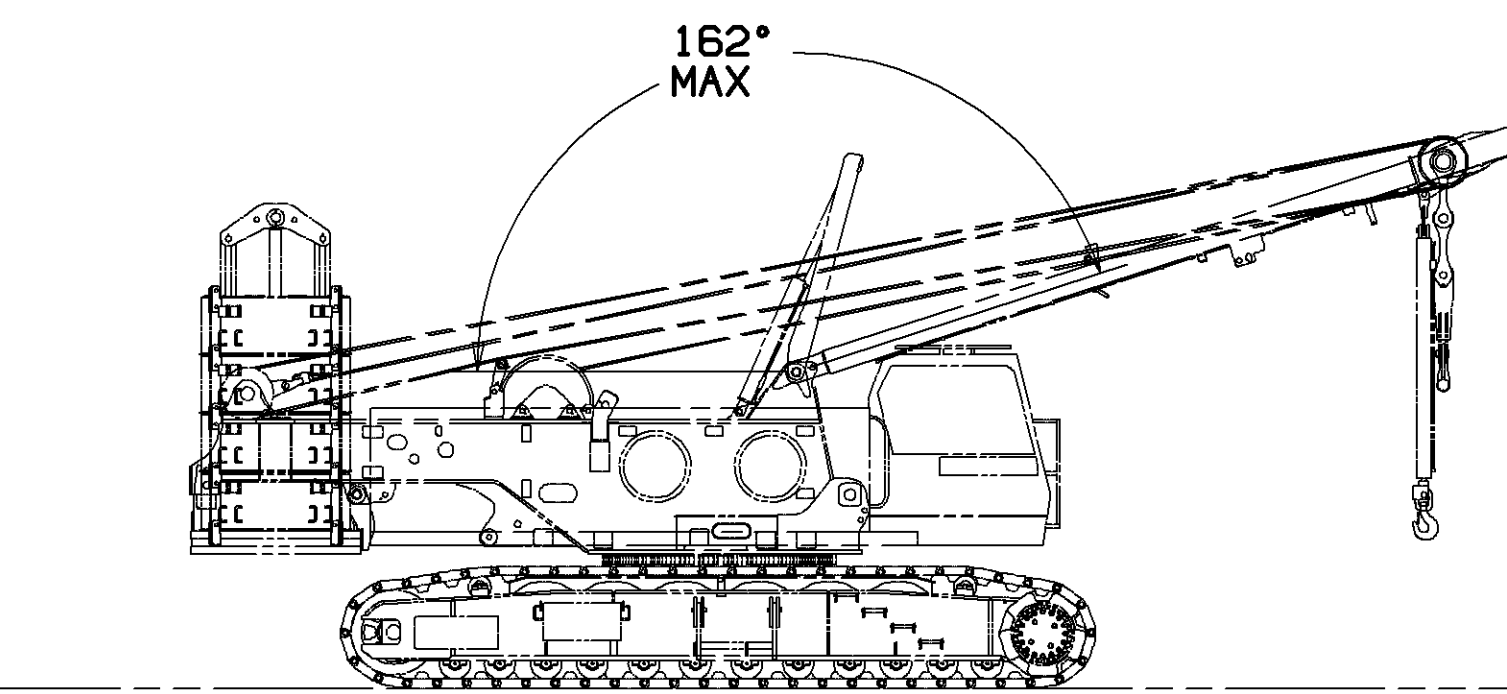
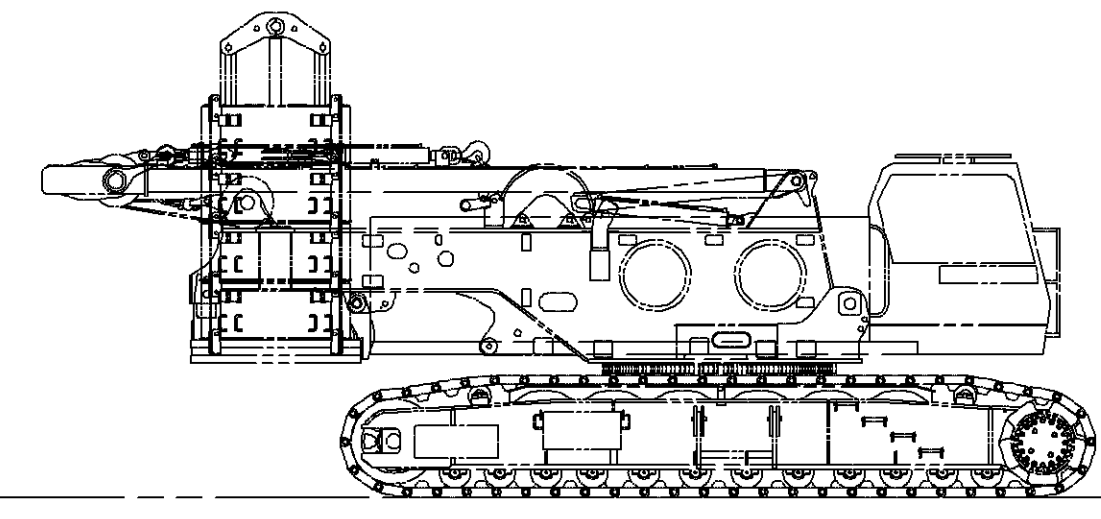
I BOOM BUTT WIRE ROPE GUIDE ARRANGEMENT
 SCALE: 0.30=1FT

DECIMAL PLACES	FRACTION	1/2" = 1'-0"	1/4" = 1'-0"	3/16" = 1'-0"	1/8" = 1'-0"	3/32" = 1'-0"	1/16" = 1'-0"	3/64" = 1'-0"	1/32" = 1'-0"	3/128" = 1'-0"	1/64" = 1'-0"
0.00	0/16	0	0	0	0	0	0	0	0	0	0
0.0625	1/16	1/32	1/64	1/128	1/256	1/512	1/1024	1/2048	1/4096	1/8192	1/16384
0.125	2/16	1/16	1/32	1/64	1/128	1/256	1/512	1/1024	1/2048	1/4096	1/8192
0.1875	3/16	3/32	3/64	3/128	3/256	3/512	3/1024	3/2048	3/4096	3/8192	3/16384
0.25	4/16	1/8	1/16	1/32	1/64	1/128	1/256	1/512	1/1024	1/2048	1/4096
0.3125	5/16	5/32	5/64	5/128	5/256	5/512	5/1024	5/2048	5/4096	5/8192	5/16384
0.375	6/16	3/8	3/16	3/32	3/64	3/128	3/256	3/512	3/1024	3/2048	3/4096
0.4375	7/16	7/32	7/64	7/128	7/256	7/512	7/1024	7/2048	7/4096	7/8192	7/16384
0.5	8/16	1/2	1/4	1/8	1/16	1/32	1/64	1/128	1/256	1/512	1/1024
0.5625	9/16	9/32	9/64	9/128	9/256	9/512	9/1024	9/2048	9/4096	9/8192	9/16384
0.625	10/16	5/8	5/16	5/32	5/64	5/128	5/256	5/512	5/1024	5/2048	5/4096
0.6875	11/16	11/32	11/64	11/128	11/256	11/512	11/1024	11/2048	11/4096	11/8192	11/16384
0.75	12/16	3/4	3/8	3/16	3/32	3/64	3/128	3/256	3/512	3/1024	3/2048
0.8125	13/16	13/32	13/64	13/128	13/256	13/512	13/1024	13/2048	13/4096	13/8192	13/16384
0.875	14/16	7/8	7/16	7/32	7/64	7/128	7/256	7/512	7/1024	7/2048	7/4096
0.9375	15/16	15/32	15/64	15/128	15/256	15/512	15/1024	15/2048	15/4096	15/8192	15/16384
1.0	16/16	1	1/2	1/4	1/8	1/16	1/32	1/64	1/128	1/256	1/512

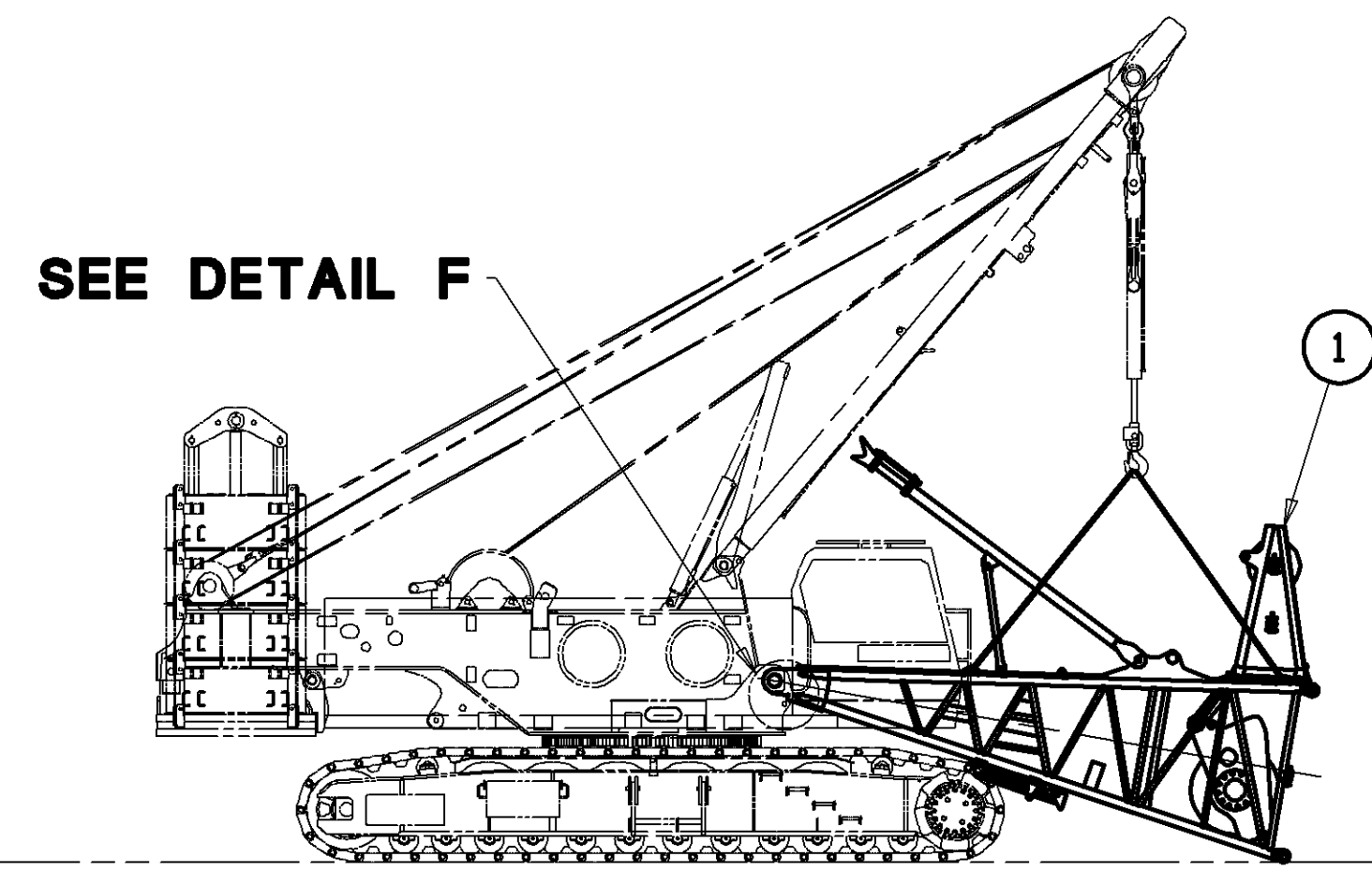
PRIVATE LABELING
 REQUIREMENT TO
 CONFORM TO
 ENGINEERING
 SPECIFICATION
 8829103794 FOR
 COMPONENTS LISTED
 IN SECTION 05-0506

DATE: 11-16-12
 PATTERN NO.

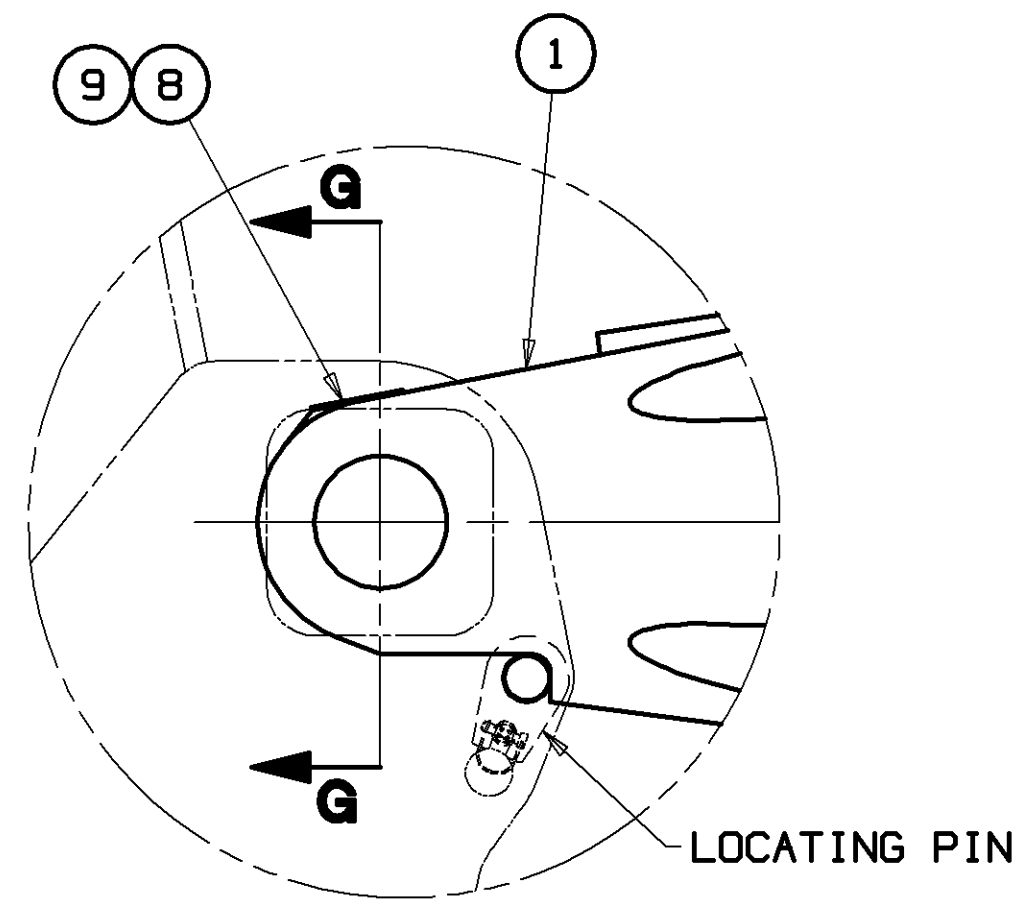
81019793
 SHT 6 OF 8



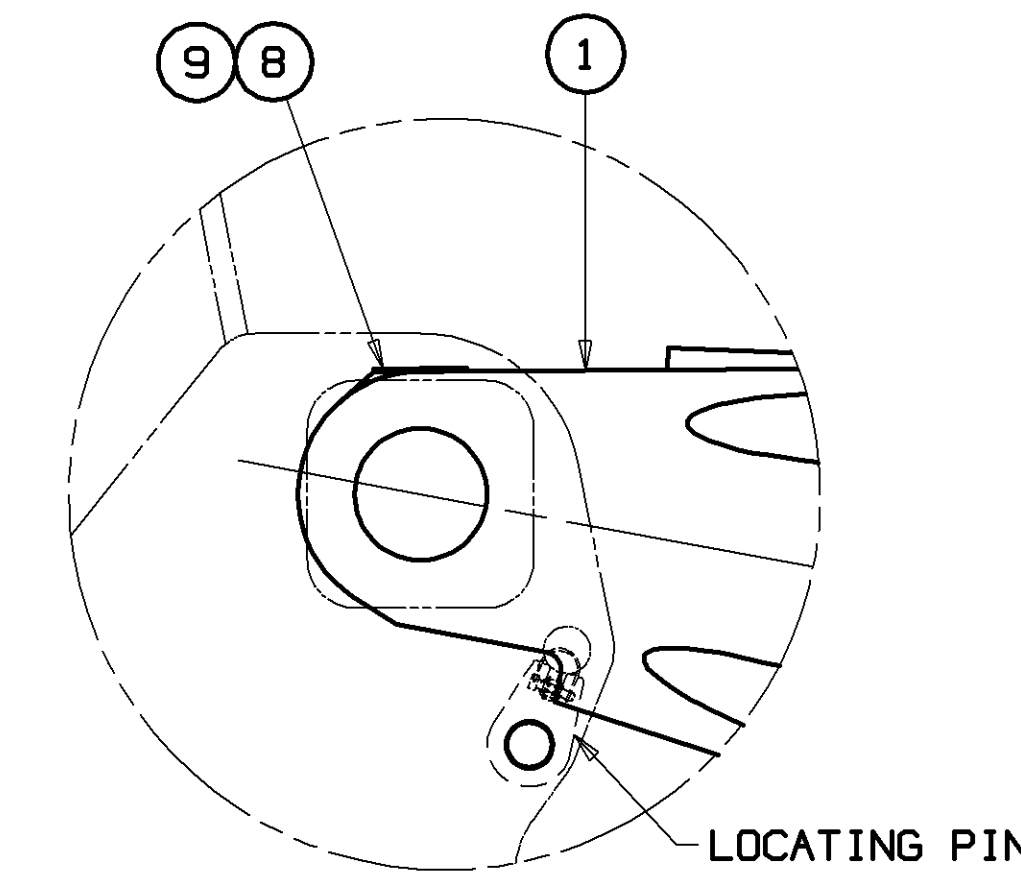
ATTACHING BOOM BUTT TO ROTATING BED USING OPTIONAL BOOM BUTT SUPPORT



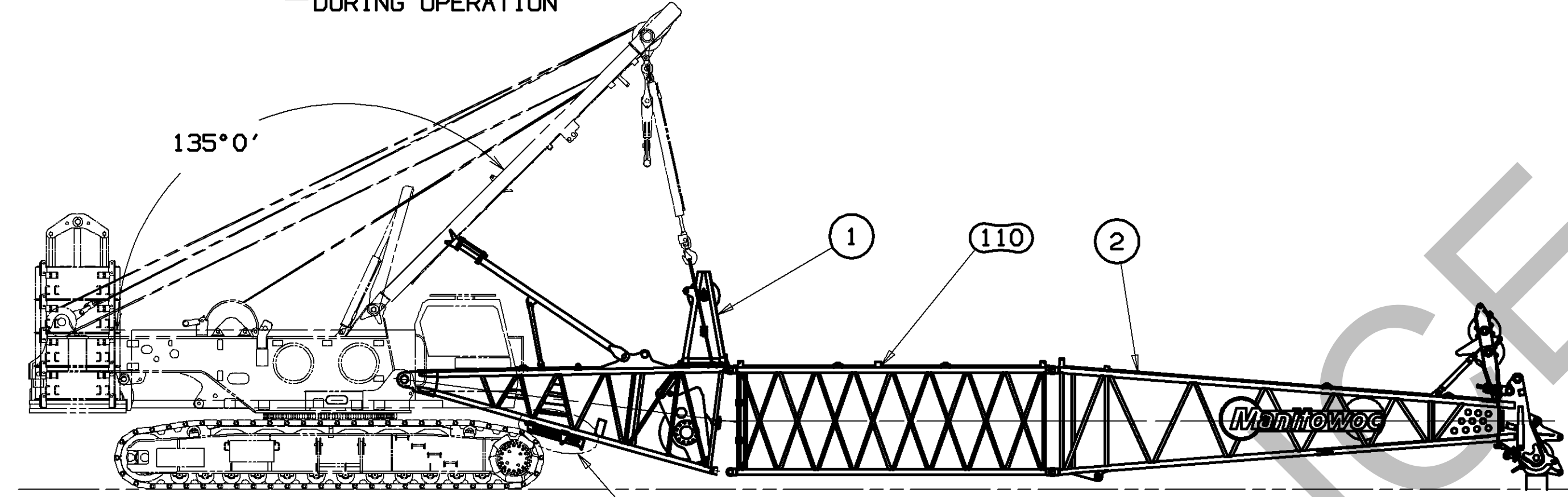
ATTACHING BOOM BUTT TO ROTATING BED USING SELF ERECT CYLINDER IN MAST



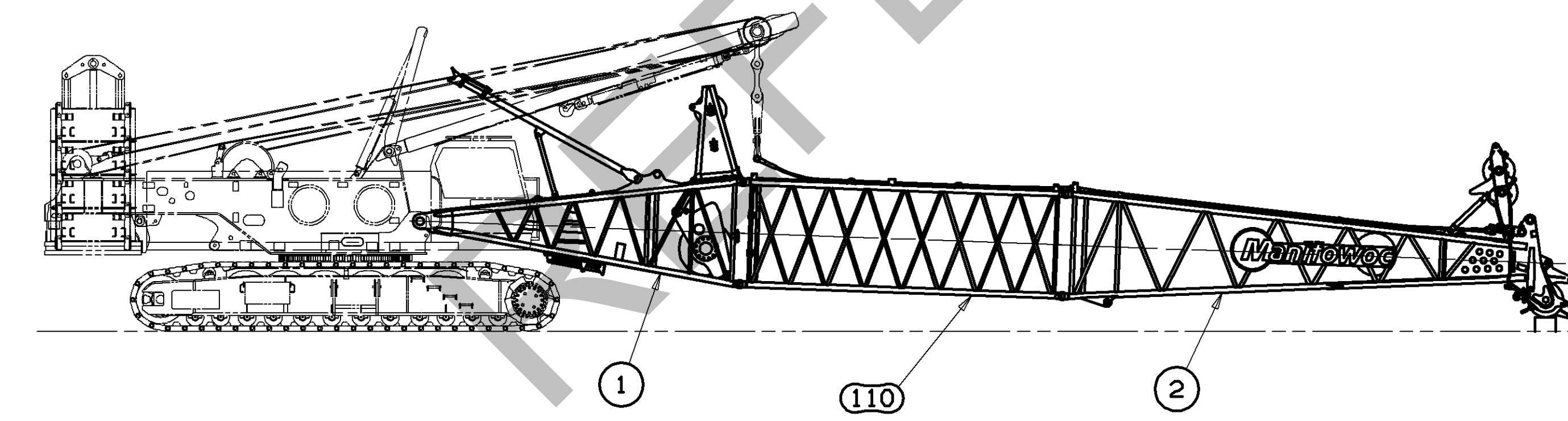
DETAIL E
SCALE: 1.5=1FT
PIN LOCATION FOR BOOM BUTT INSTALLATION USING OPTIONAL BOOM BUTT SUPPORT



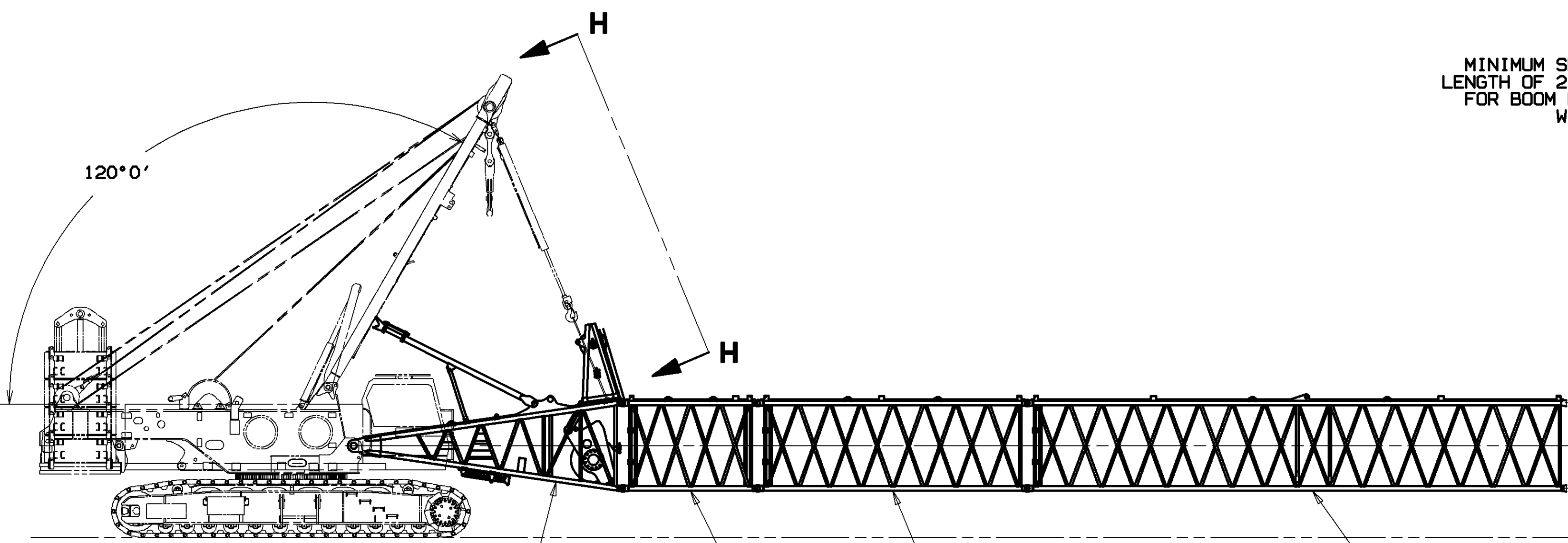
DETAIL F
SCALE: 1.5=1FT
PIN LOCATION DURING OPERATION



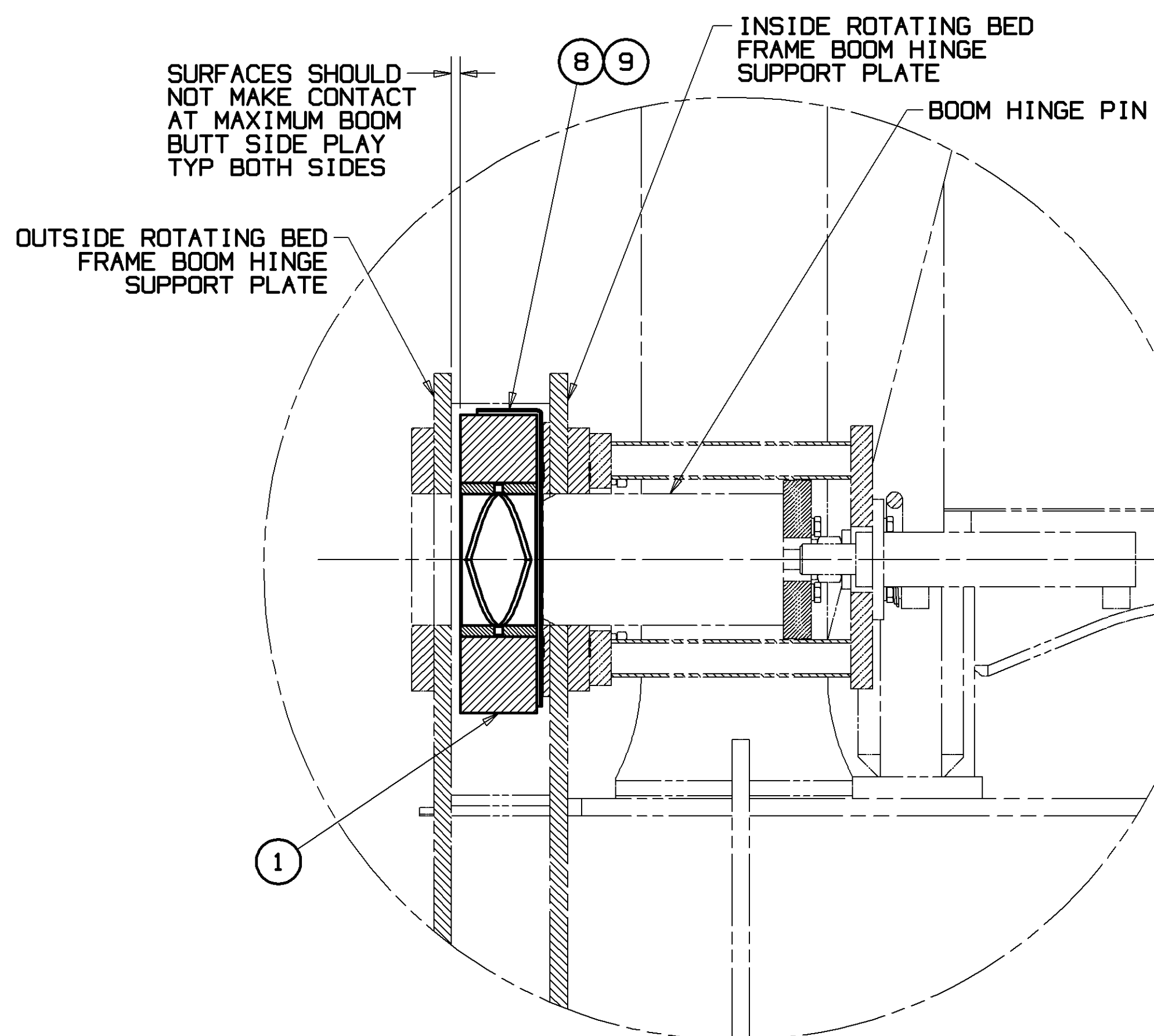
BOOM CLOSING



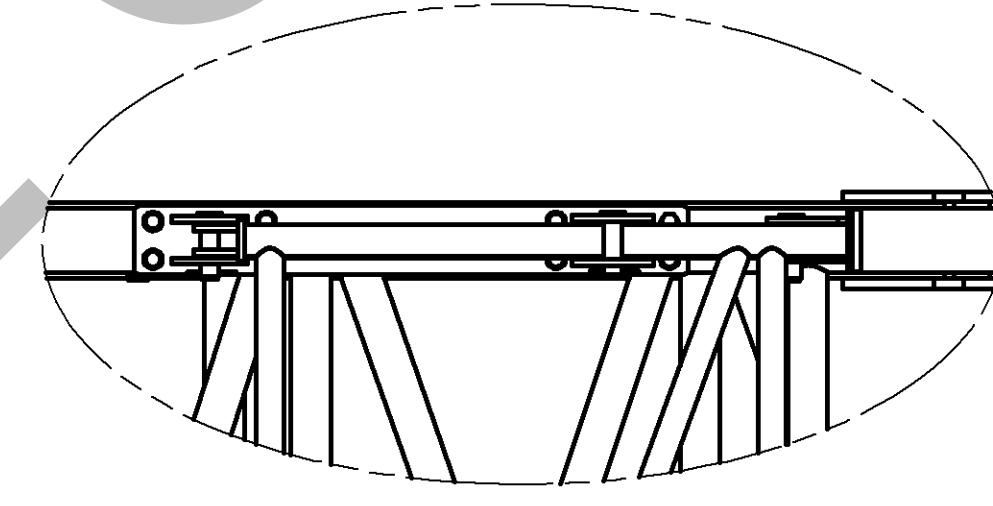
BOOM HOOK UP



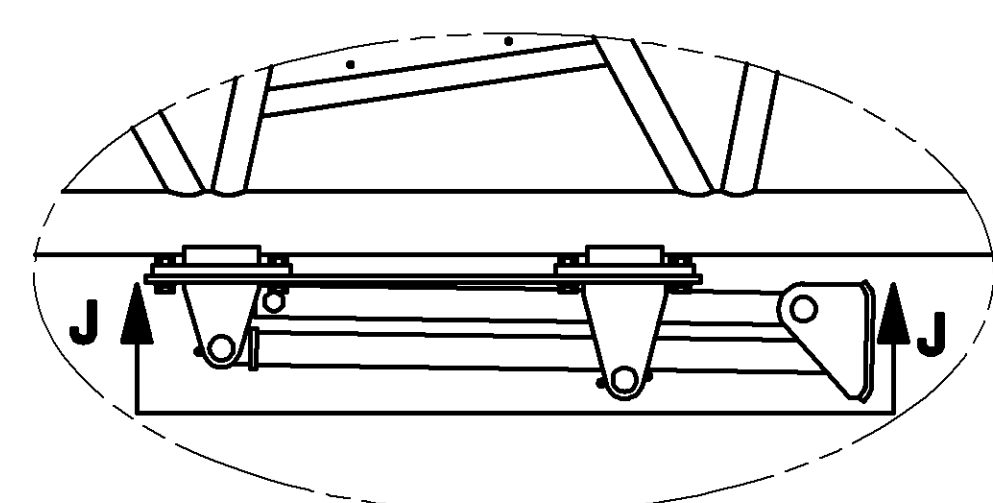
BOOM HANDLING WITH MAST



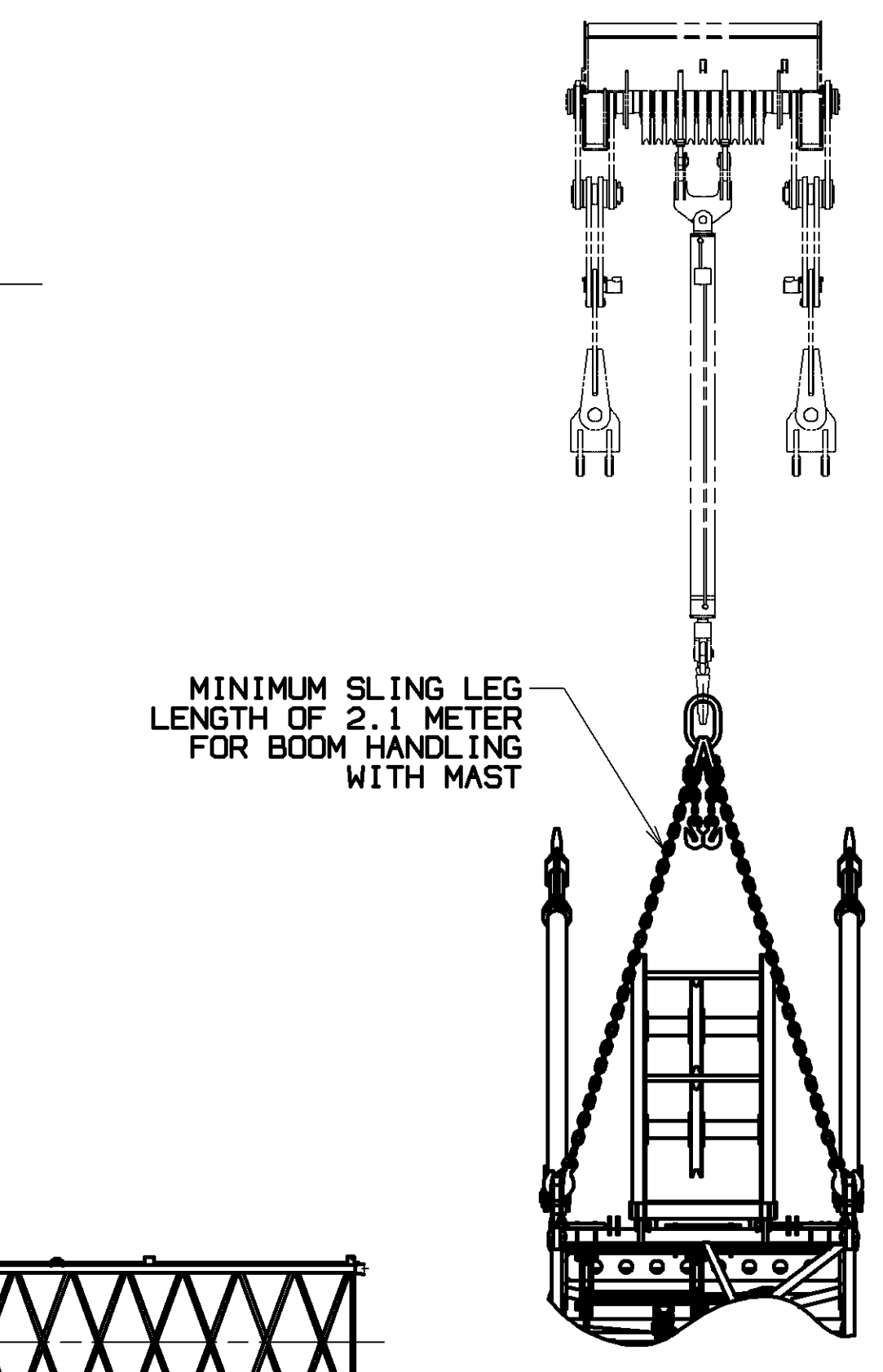
SECTION G-G
SCALE: 3=1FT
SHIM LOCATION FOR BOOM BUTT INSTALLATION



VIEW J-J
SCALE 1=1FT



DETAIL K
SCALE 1=1FT
BOOM SUPPORT FOLDS UP ROTATED 15°



VIEW H-H
SCALE .3=1FT

MINIMUM SLING LEG LENGTH OF 2.1 METER FOR BOOM HANDLING WITH MAST

BILL OF MATERIAL		ASSEMBLIES USED IN
QTY	DESCRIPTION	NO.

- MA TO ASSEMBLE BOOM**
- (MAST CAN BE USED TO ASSEMBLE ALL RIGGING COMPONENTS)
- ASSEMBLE BOOM COMPLETE, WITHOUT BUTT.
 - ATTACH ROPE GUIDES, STRAPS, LINKS AND PINS AS REQUIRED. (SEE BOOM BUTT WIRE ROPE GUIDE ARRANGEMENT SHEET 6)
 - INSTALL BUTT WITH MAST AND ASSEMBLY CYLINDER.

- N BOOM BUTT INSTALLATION**
- SUPPORT BUTT WITH ASSEMBLY CYLINDER, ATTACH CHAIN SLINGS AND USER SUPPLIED SLINGS AS REQUIRED TO HANG BUTT.
 - POSITION LOCATING PINS AS SHOWN IN "DETAIL F". USE ASSEMBLY CYLINDER AND BOOM HOIST TO ALIGN BOOM HINGE HOLES IN BUTT AND ROTATING BED. SEE SHEET 7.
- TO INSTALL BOOM BUTT WITH AUX DRUM USING OPTIONAL BOOM BUTT SUPPORTS, SEE SHEET 7
- WITH BOOM BUTT SUPPORTED BY OPTIONAL BOOM BUTT SUPPORTS, POSITION LOCATING PINS AS SHOWN IN "DETAIL E".
 - POSITION CRANE TO INSERT BOOM BUTT HINGE PLATES BETWEEN BOOM HINGE PLATES ON ROTATING BED WITH NOTCH IN BUTT RESTING AGAINST LOCATING PIN AS SHOWN IN "DETAIL E".
 - IF NEEDED TO PREVENT BOOM BUTT CONTACT WITH OUTSIDE ROTATING BED SUPPORT PLATES, INSERT SHIMS (ITEMS 8 & 9) BETWEEN THE BOOM BUTT HINGE PLATE AND THE INSIDE ROTATING BED LUGS ON EACH SIDE OF THE MACHINE AS SHOWN IN "SECTION G-G".
 - LOCATE THE SHIM TABS TO THE TOP SIDE RESTING ON THE BOOM BUTT HINGE PLATE WITH PIN HOLES ALIGNED.
 - INSERT BOOM HINGE PINS.
 - STOW LOCATING PINS AS SHOWN IN "DETAIL F".
 - LOWER BUTT DOWN FOR BOOM CLOSING. SEE SHEET 7.

WARNING:
REPOSITION LOCATING PINS AS SHOWN IN "DETAIL F" BEFORE OPERATING BOOM OR DAMAGE TO BUTT, ROTATING BED AND/OR LOCATING PINS WILL OCCUR.

NOTE:
THE MAXIMUM BOOM BUTT SIDE PLAY SHOULD CAUSE THE BOOM BUTT HINGE PLATE TO MAKE CONTACT WITH THE INSIDE ROTATING HINGE PLATE. NOT ALLOWING IT TO CONTACT THE OUTSIDE ROTATING BED HINGE PLATE.

- POSITION MACHINE TO ALIGN UPPER PIN CONNECTOR ON BOOM BUTT WITH UPPER PIN CONNECTOR PINS ON FIRST BOOM INSERT AND ENGAGE PINS. SEE SHEET 7.
- SLOWLY BOOM UP TO ALIGN LOWER PIN CONNECTOR HOLES ON BOOM BUTT WITH LOWER PIN CONNECTOR HOLES IN FIRST BOOM INSERT AND INSERT DOUBLE TAPER PINS (81026766) STOWED ON BOOM BUTT.

WARNING:
DO NOT BOOM UP PAST LOWER CONNECTOR HOLES. IF BOOMING UP CONTINUES AFTER CONNECTORS BOTTOM OUT OR AFTER PINS ARE INSERTED. DAMAGE TO MAST AND/OR BOOM BUTT WILL OCCUR.

- BOOM DOWN TO DISCONNECT ASSEMBLY CYLINDER FROM BUTT AND REMOVE CHAIN FROM ASSEMBLY CYLINDER HOOK.
- BOOM UP TO MAST SHIPPING POSITION, INSERT ASSEMBLY CYLINDER STORAGE PINS TO SHIPPING POSITION.
- BOOM DOWN TO ATTACH STRAPS ON MAST TO INSERT PENDANTS.

WARNING:
DURING BOOM ASSEMBLY/DISASSEMBLY DO NOT BOOM DOWN MAST ANGLE BEYOND 162° WITHOUT ATTACHING ASSIST CRANE OR MAST CAN FALL. MAST ANGLE BEYOND 152° LOCATE GUARD ROLLER IN POSITION 1 AND INSERT LOCK PINS, MAST ANGLE BELOW 60° LOCATE GUARD ROLLER IN POSITION 2 AND INSERT LOCK PINS (SHOWN IN SHEET 6), OR DAMAGE TO BOOM HOIST OR GUARD ROLLER WILL OCCUR.

- BOOM UP TO DESIRED BOOM ANGLE.

TO DISASSEMBLE BOOM

- BOOM DOWN AND SUPPORT BOOM ON BLOCKING. LAY INSERT PENDANTS ON INSERT TOP.
- DISCONNECT MAST STRAPS FROM BOOM INSERT PENDANTS.
- ATTACH ASSEMBLY CYLINDER TO LUGS ON BOOM BUTT.
- BOOM UP TO REMOVE SLACK FROM BUTT HANDLING CHAIN.

WARNING:
DO NOT BOOM UP MAST TO PUT EXCESSIVE TENSION INTO BUTT HANDLING CHAIN. (ENOUGH TENSION IS REQUIRED TO SUPPORT BOOM BUTT WHEN LOWER PINS ARE REMOVED.) LIFTING BOOM WITH HANDLING CHAIN WILL DAMAGE MAST AND/OR BOOM BUTT. (SHOWN IN SHEET 7)

- REMOVE LOWER BUTT TO INSERT PINS AND BOOM DOWN TO BLOCKING TO DISENGAGE UPPER BOOM BUTT TO INSERT PINS.

WARNING:
BOOM MUST BE PROPERLY BLOCKED TO PREVENT SHIFTING DURING REMOVAL.

- SLOWLY BACK AWAY FROM BOOM.
- REMOVE BOOM BUTT FROM ROTATING BED.
- DISASSEMBLE BOOM WITH MAST. REMOVE UPPER CONNECTOR PINS FIRST.

WARNING:
DURING BOOM ASSEMBLY/DISASSEMBLY MAST RAISING CYLINDERS MUST BE EXTENDED TO MAX STROKE TO PROTECT AGAINST MAST TURNOVER. MAST ANGLES BELOW 104° WITHOUT LOAD ATTACHED OR MAST RAISING CYLINDER SUPPORT WILL RESULT IN MAST TURN OVER. DAMAGE TO MACHINE AND MAST WILL OCCUR.

BOOM HANDLING WITH MAST			
MAXIMUM BOOM THAT CAN BE CANTILEVERED IS AS FOLLOWS			
LENGTH	INSERT 3.00M (9.8 FT) ASSY	INSERT 6.00M (19.7 FT) ASSY	INSERT 12.00M (39.4 FT) ASSY
3.00M (9.8 FT)	1	0	0
6.00M (19.7 FT)	0	1	0
9.00M (29.5 FT)	1	1	0
12.00M (39.4 FT)	OR 0	0	1
15.00M (49.2 FT)	OR 0	2	0
18.00M (59.0 FT)	OR 1	0	1
21.00M (68.9 FT)	OR 1	2	0
24.00M (78.7 FT)	OR 0	1	1
	OR 0	2	1
	OR 0	0	2

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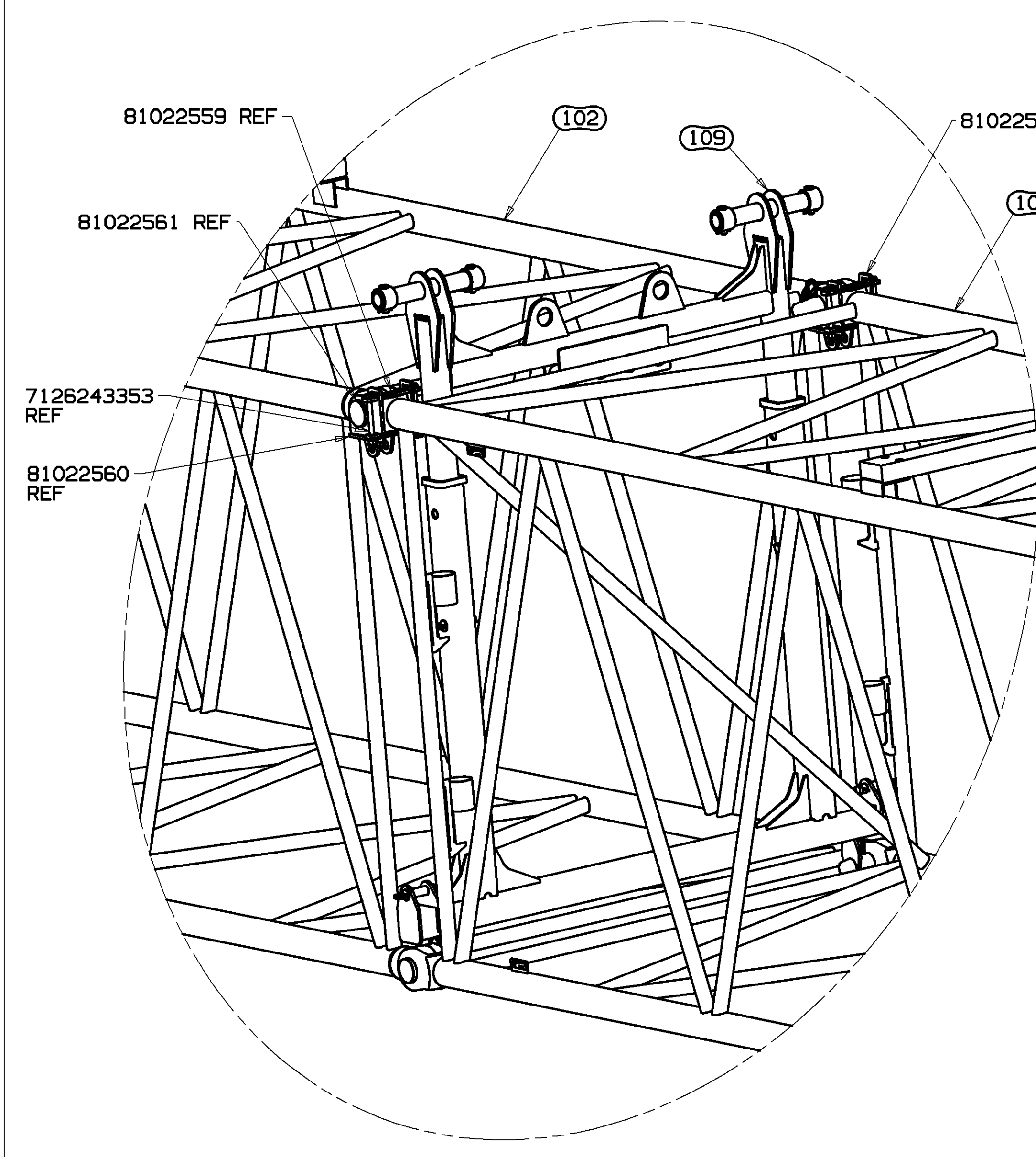
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B	UPDATED NOTE	
05-17-13	MER	
C	ADDED NOTE	
D	VIEW MOVED FROM SHT. 6	
E	FITABLE MOVED FROM SHT. 6	
F	VIEW ADDED	
12-05-13	RHV	
G	ADDED FROM	
H	MINI PROCEDURE	

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SHT 7 OF 8

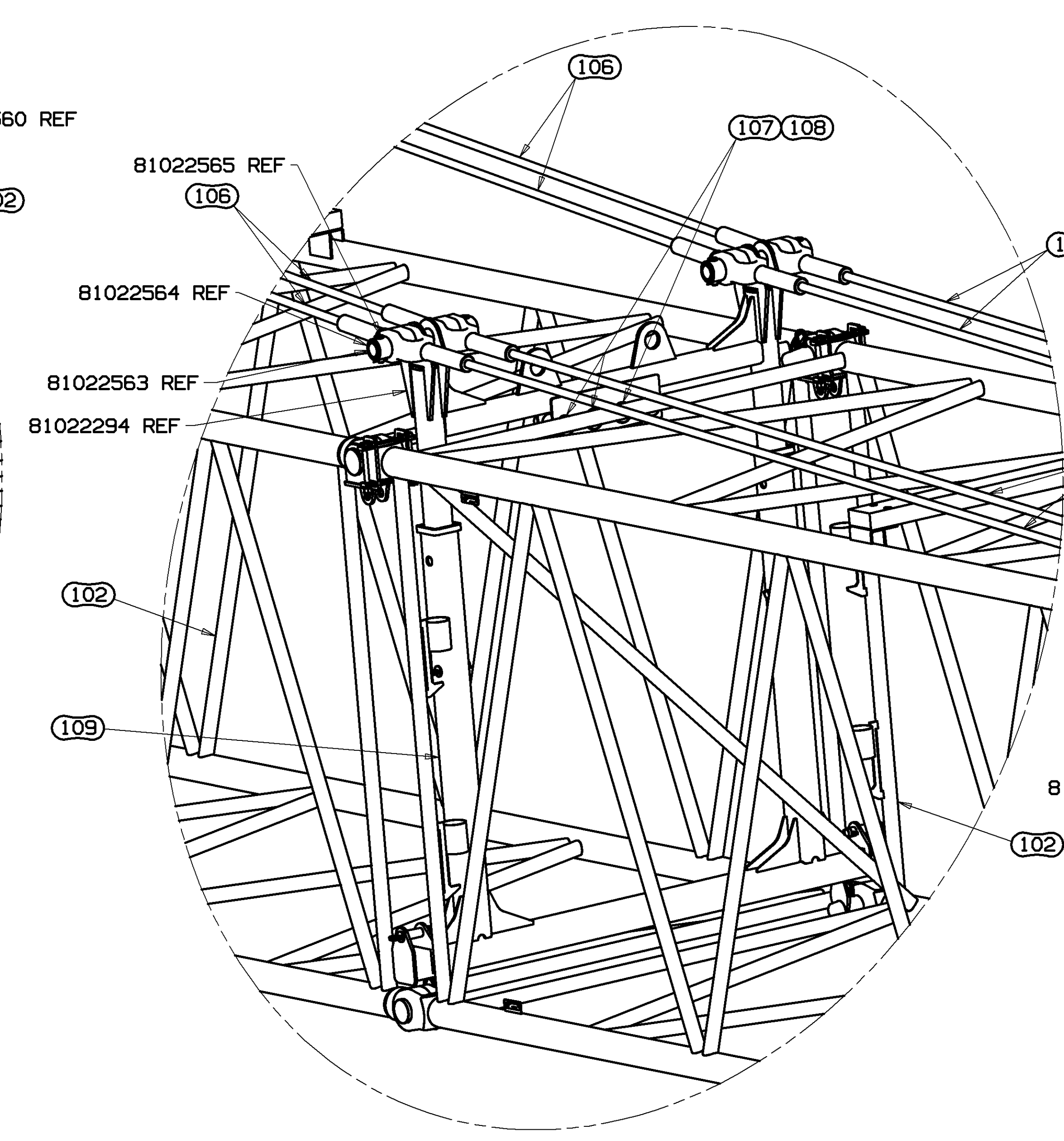
PRIVATE LABELING REQUIREMENT TO CONFORM TO ENGINEERING SPECIFICATION 8629103794 FOR COMPONENTS LISTED IN 86290-05-026

11-16-12
PATTERN NO.

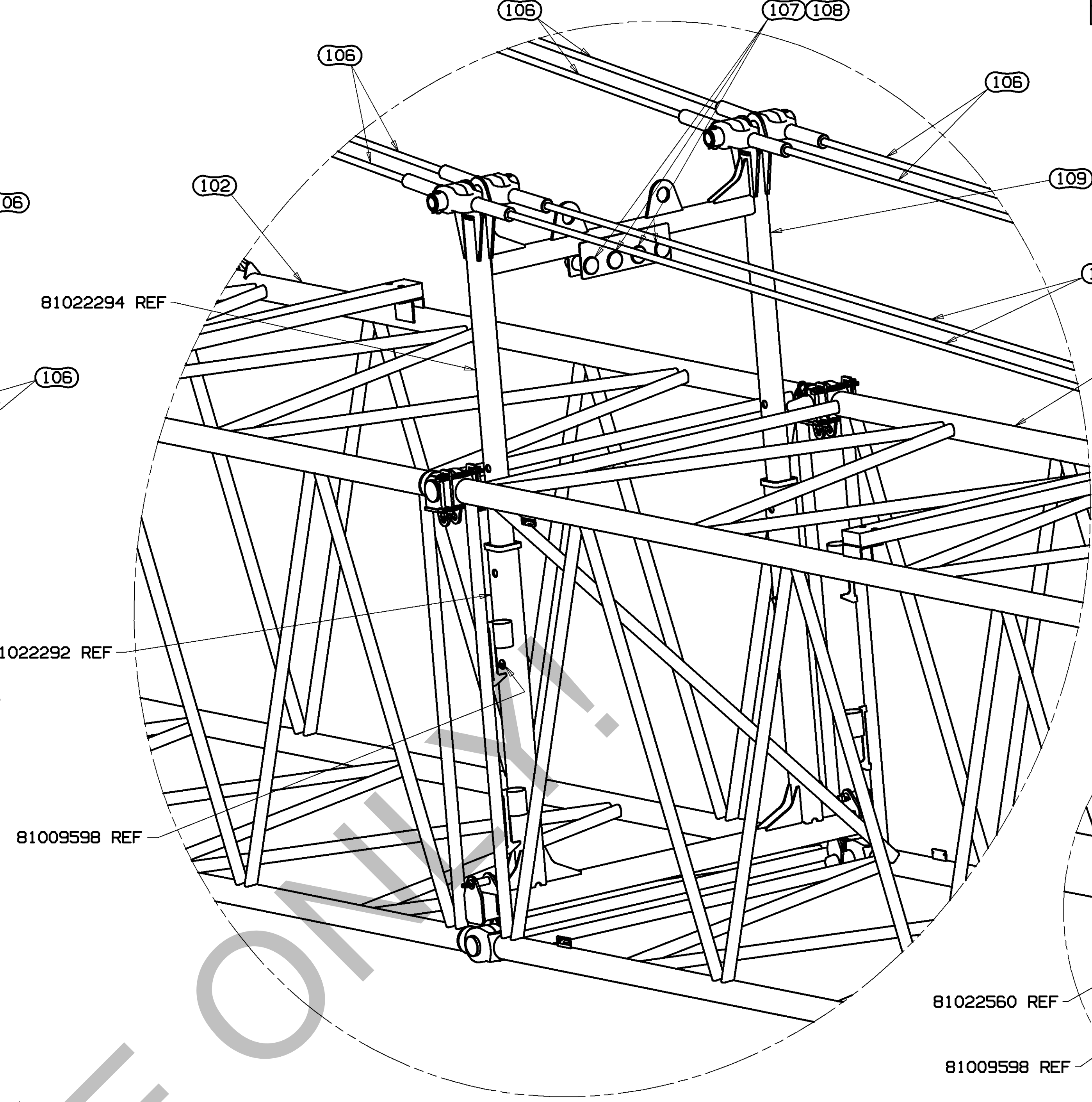
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SHT 7 OF 8



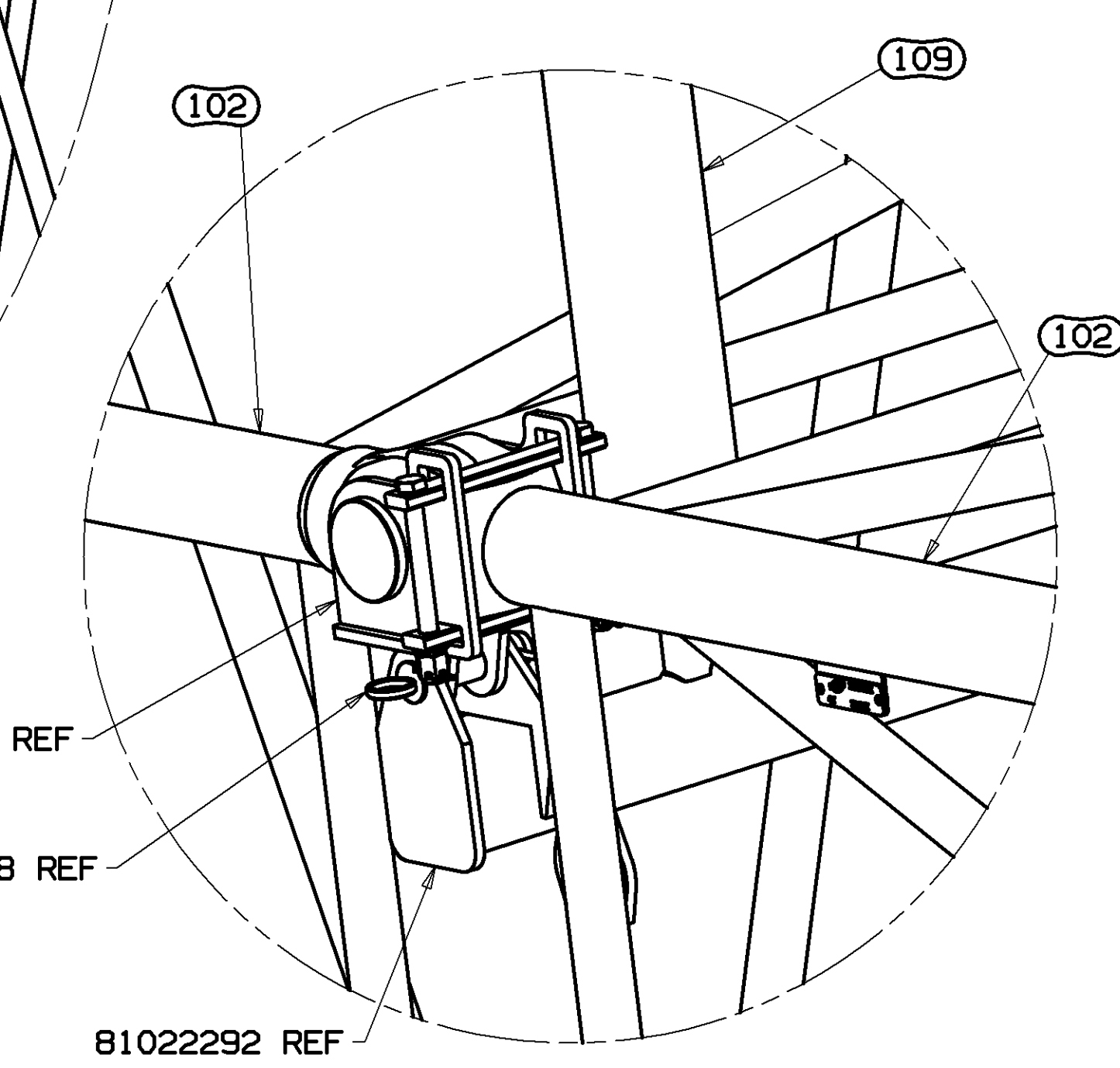
INTERMEDIATE SUSPENSION STEP 1
SCALE: 1=12FT



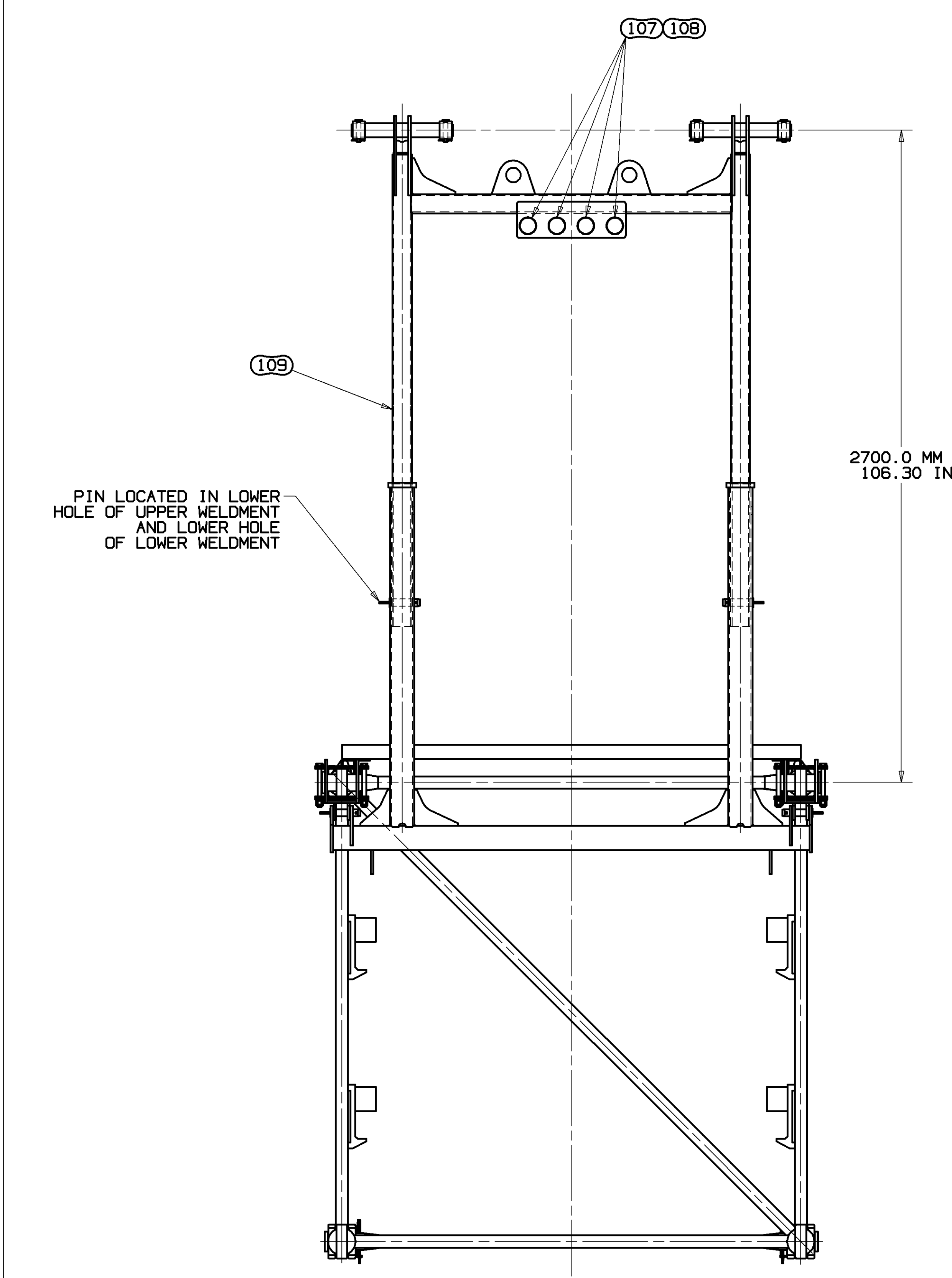
INTERMEDIATE SUSPENSION STEP 2
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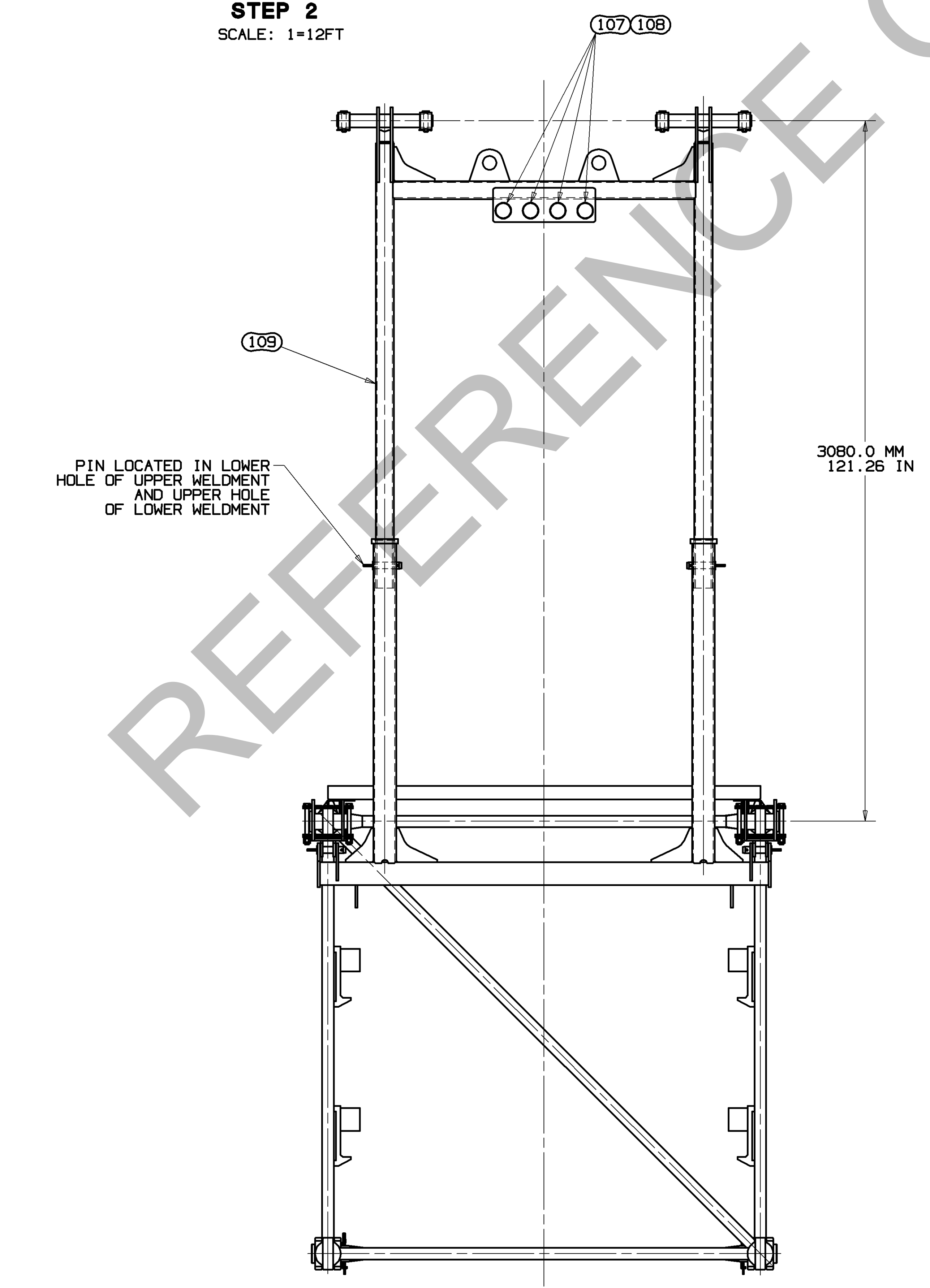
INTERMEDIATE SUSPENSION STEP 3
SCALE: 1=12FT



INTERMEDIATE SUSPENSION STEP 4
SCALE: 2.4=12FT



SHORT STRUT CONFIGURATION
72M, 75M AND 78M BOOM
SCALE: 1=12FT



LONG STRUT CONFIGURATION
81M AND 84M BOOM
SCALE: 1=12FT

INTERMEDIATE SUSPENSION INSTALLATION

- SEE BOOM COMBINATION TABLE SHEET 1 AND VIEWS SHEETS 5 & 6 FOR INTERMEDIATE STRUT (ITEM 109) LOCATIONS FOR VARIOUS BOOM LENGTHS
- STEP 1: ATTACH BRACKETS 81022560 TO THE UPPER CONNECTORS USING BOOM CONNECTOR PINS 81022561.
- STEP 2: ATTACH STRUT WELDMENT 81022294 TO BOOM PENDANTS USING BOOM PENDANT PINS 81022563.
- STEP 3: ATTACH STRUT WELDMENT 81022294 TO STRUT WELDMENT 81022292 USING PINS 81009598. USE THE APPROPRIATE HOLES IN LINKS BASED ON THE REQUIRED INTERMEDIATE SUSPENSION LENGTH.
- STEP 4: ATTACH STRUT WELDMENT 81022292 TO BRACKETS 81022560 USING PINS 81009598.

REFERENCE

TOLERANCE UNLESS OTHERWISE SPECIFIED		SCALE	75=1FT	DATE	11-16-12
DECIMAL PLACES	FABRICATION	DR. CDC	Manitowoc Cranes, Inc.	MODEL	MLC165
(1) PLACE 0.5	±.12 ±.18 ±.03	CHK. MER	Manitowoc, Wisconsin	APP	PMP
(2) PLACE 0.00	±.08 ±.12 ±.015				
(3) PLACE 0.000	±.008 ±.008 ±.000				
ANGLES	±1.30				

PRIVATE LABELING REQUIREMENT TO CONFORM TO ENGINEERING SPECIFICATION 8629103794 FOR COMPONENTS LISTED IN SECTION 05-056
DATE 11-16-12
PATTERN NO.
BOOM ASSY #74
81019793
SHT 8 OF 8