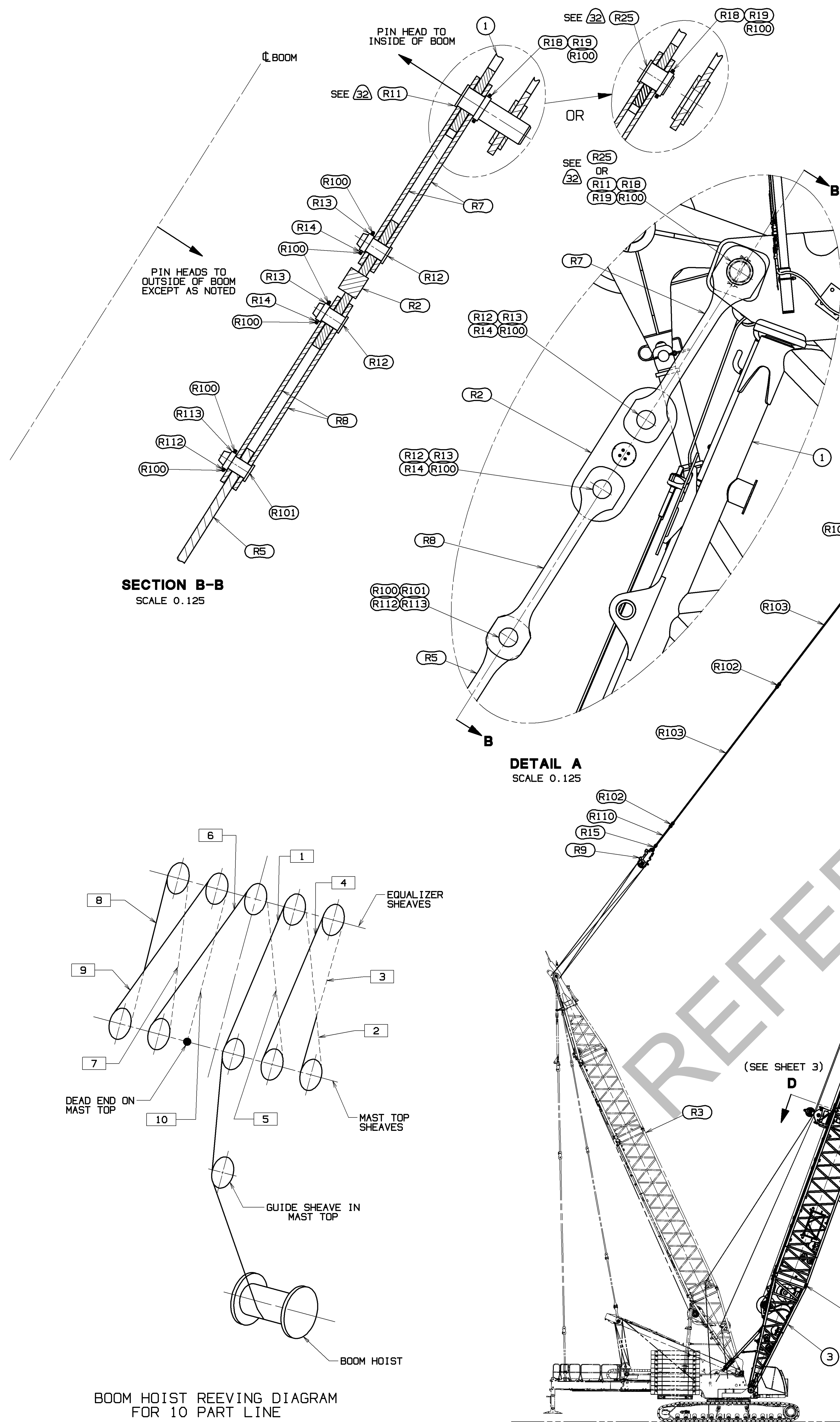




BOOM HOIST REEVING DIAGRAM
FOR 10 PART LINE
FOR REFERENCE ONLY

96.0M (315.0 FT)
#505-500 BOOM SHOWN

SEE DETAIL A

DETAIL A
SCALE 0.125

SECTION B-B
SCALE 0.125

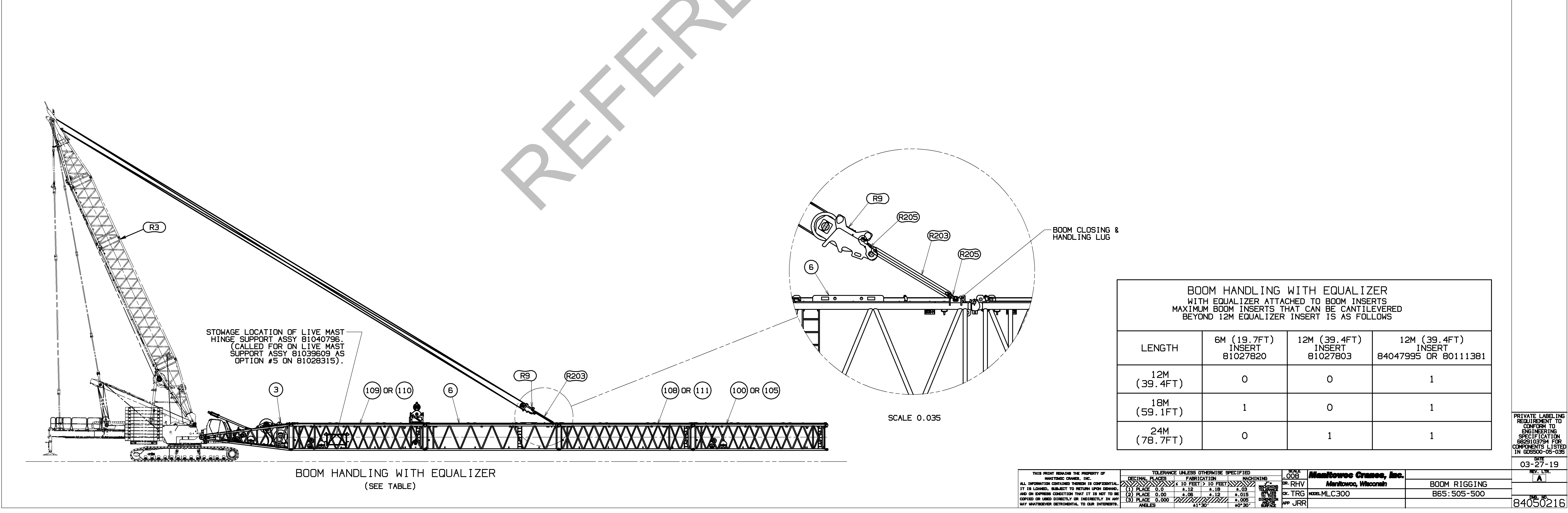
TABLE FOR OPTIONAL I.D. TAG NO. PER SPECIFIC SERIAL NUMBER		
STANDARD I.D. TAG#	OPTIONAL I.D. TAG# PER S/N	SERIAL NUMBERS
81027804	81027805	689535- 799165 1791626-1802759
81027809	81027810	663556- 796718 1780713-1782931
81027812	81027813	757034- 806114 1757058-1757085
81027815	81027816	731934- 799166 1692815-1781150
81027818	81027819	699764- 799167 1777200-1780235
81027821	81027822	668416- 797214 1776722-1778448

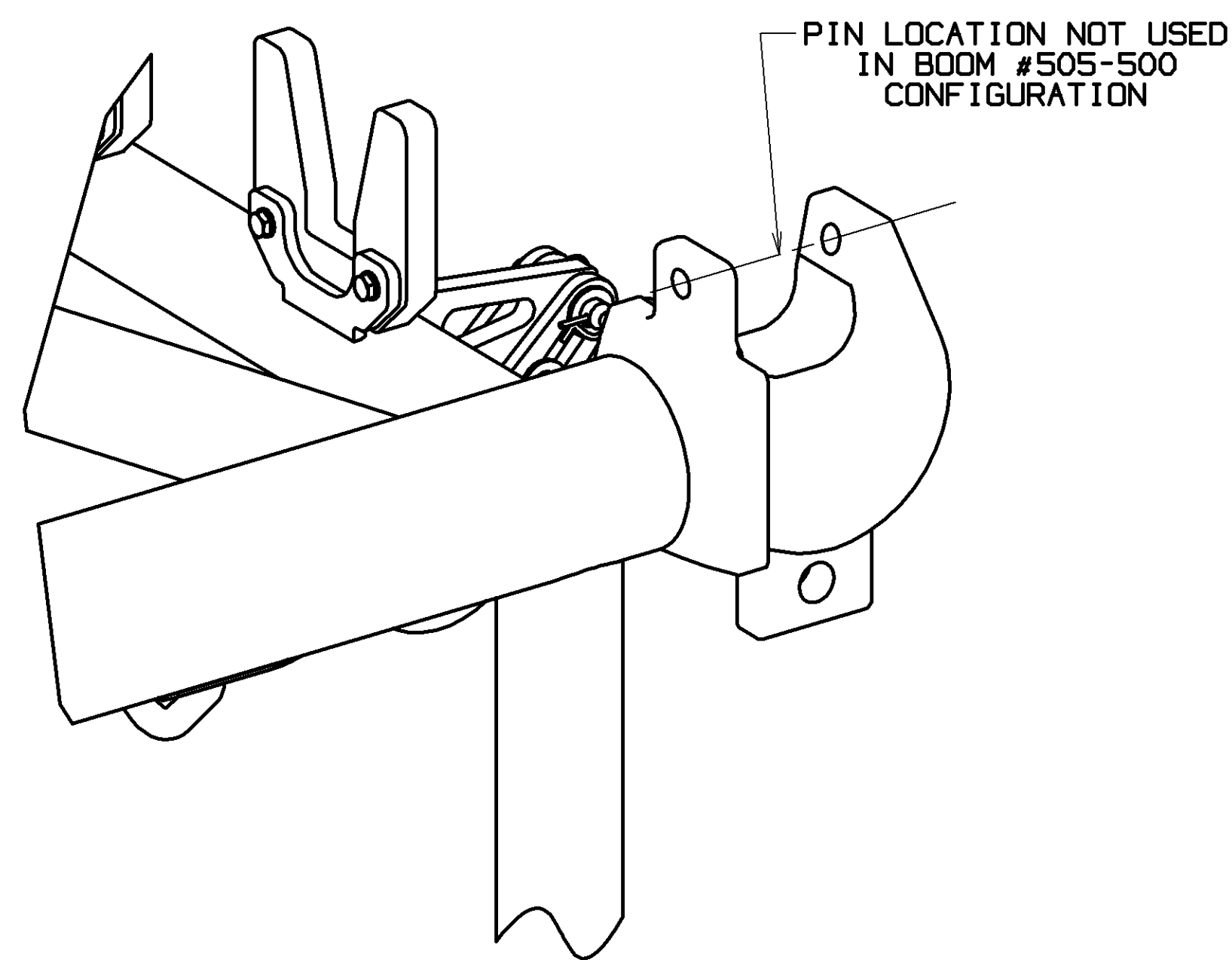
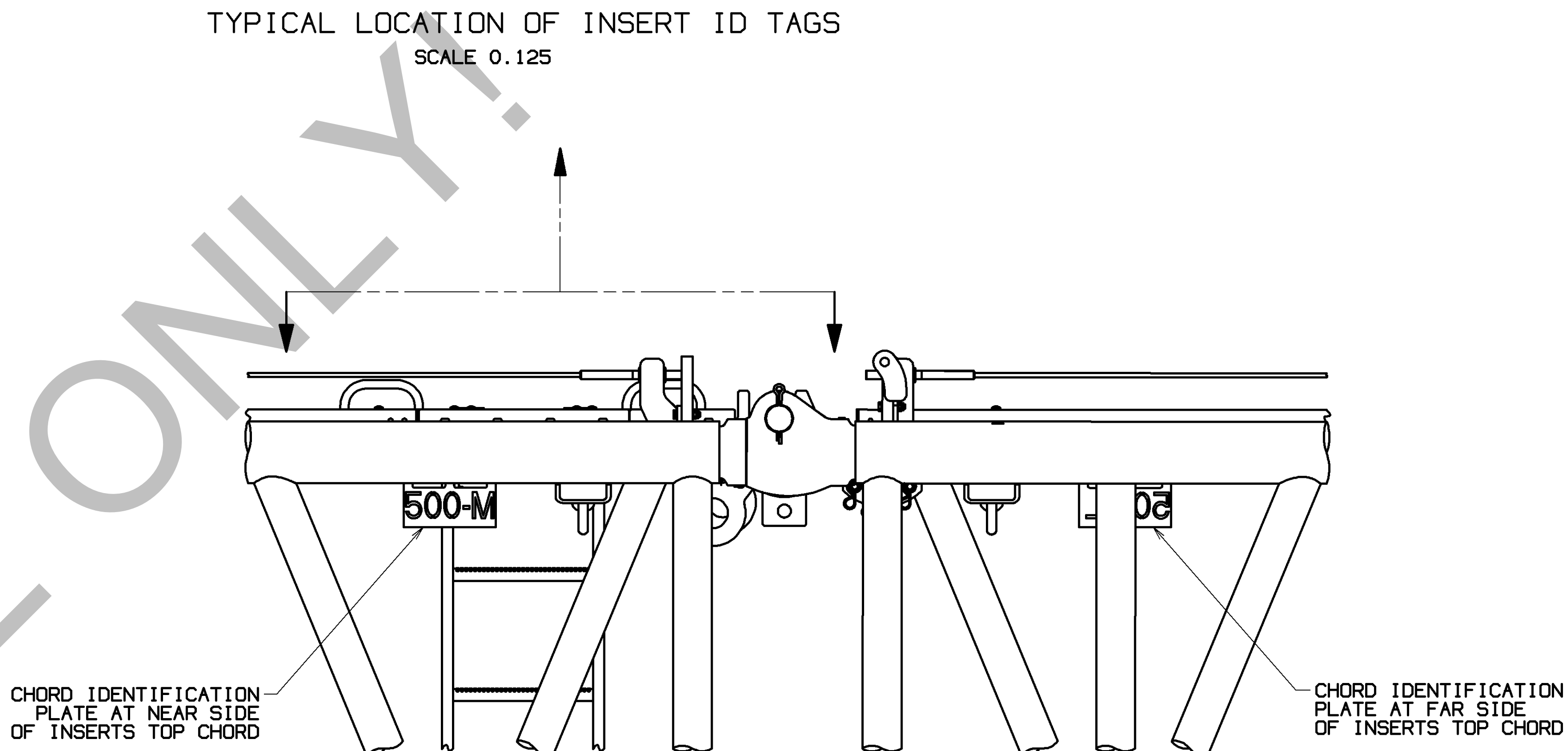
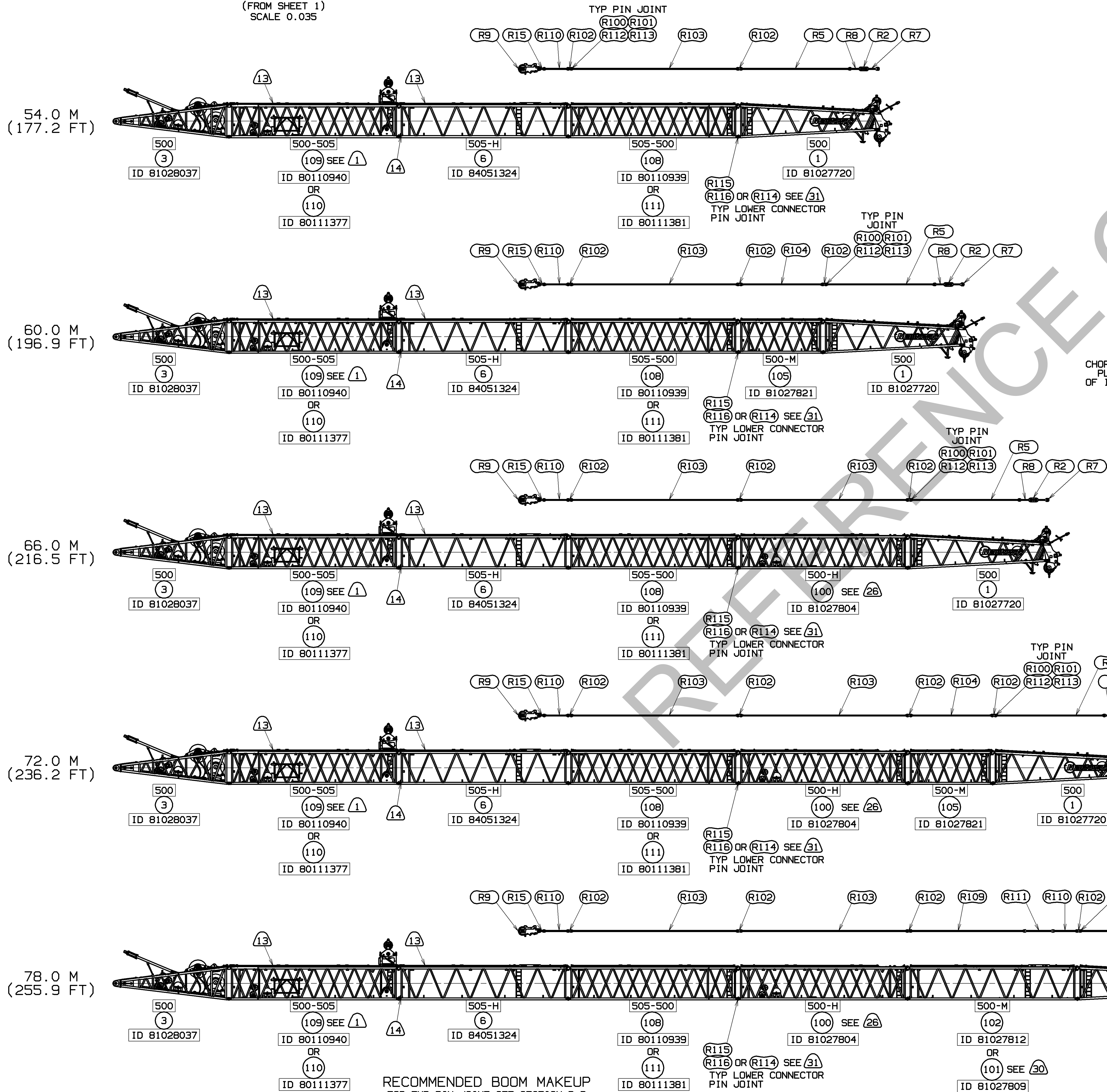
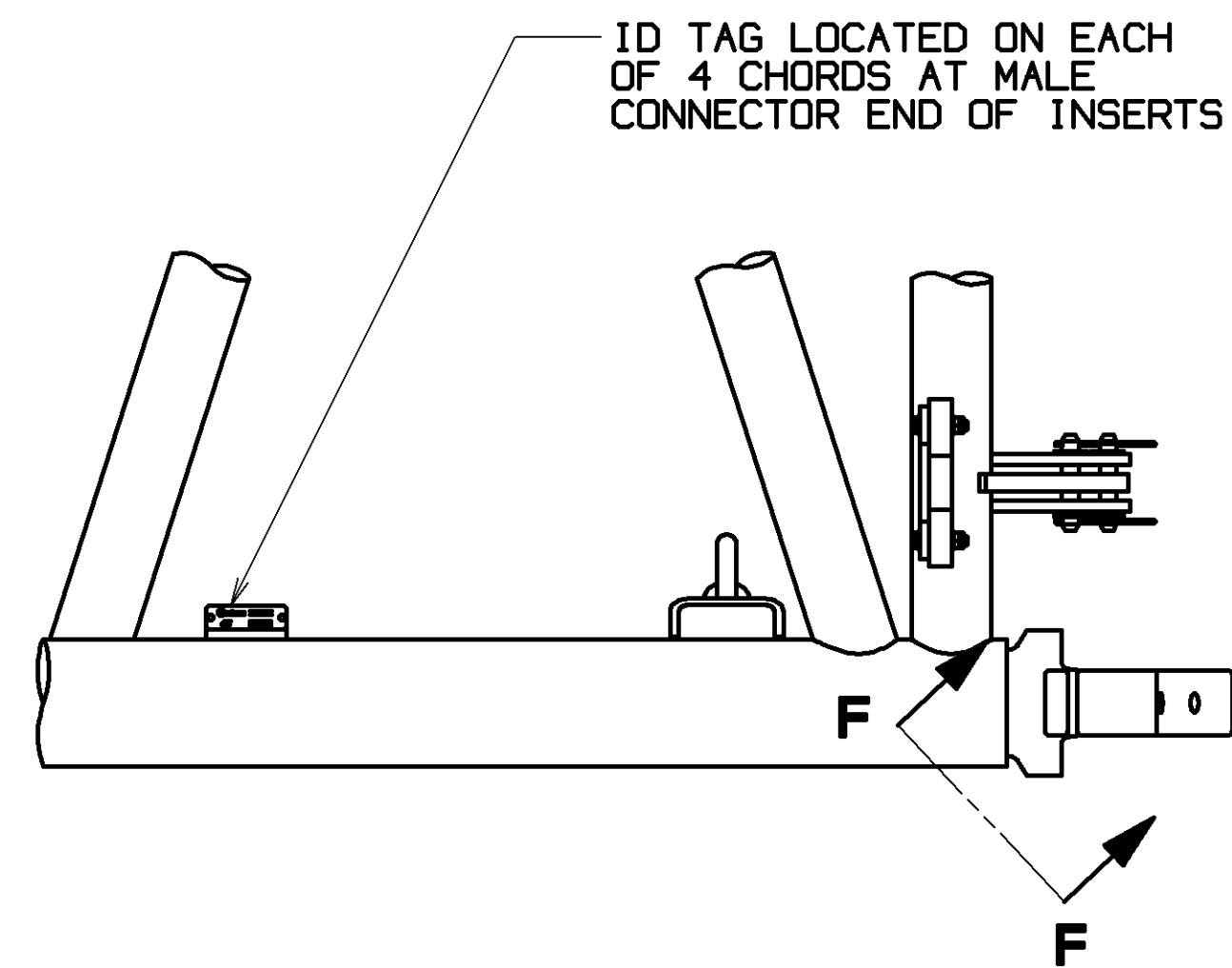
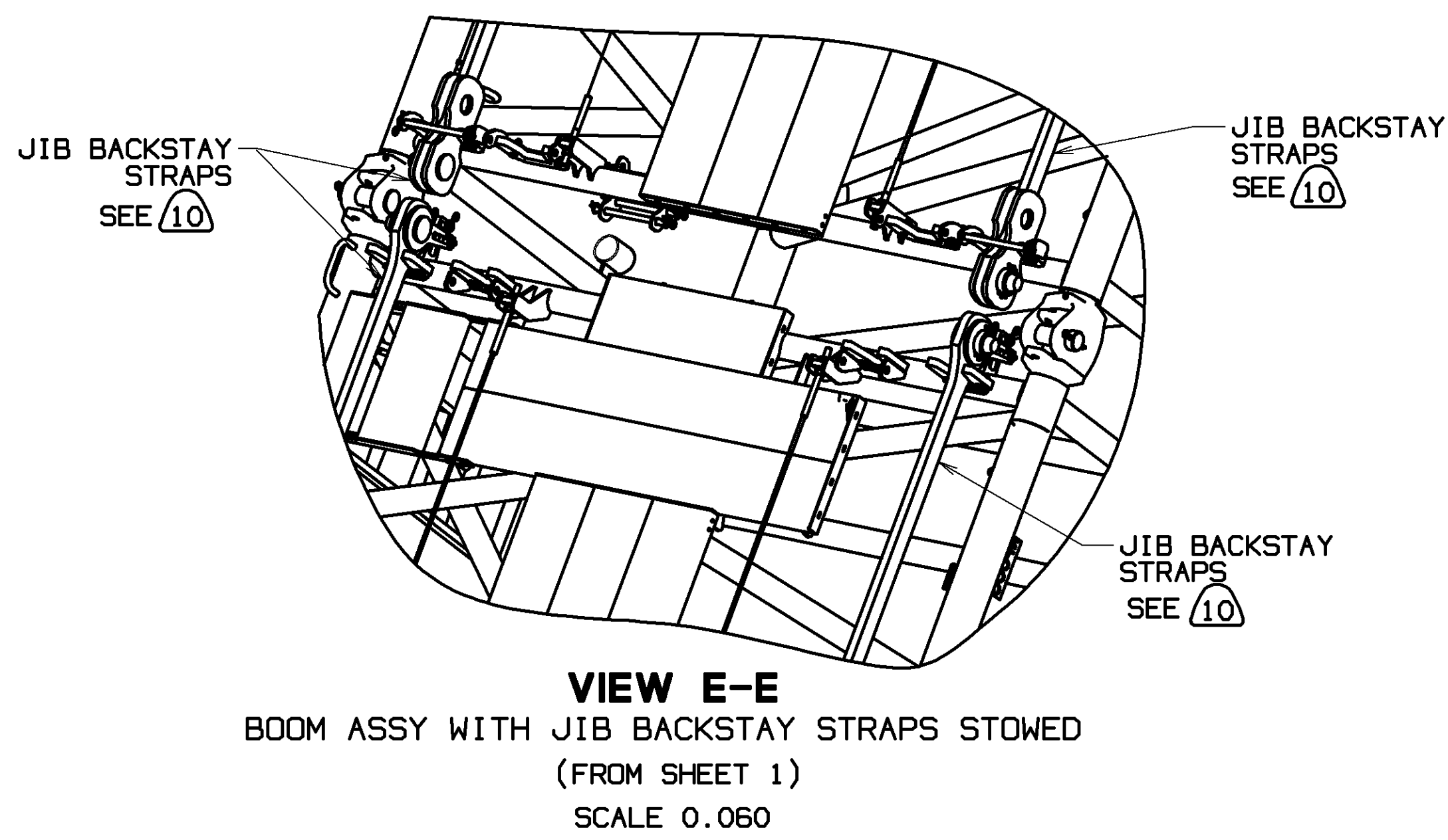
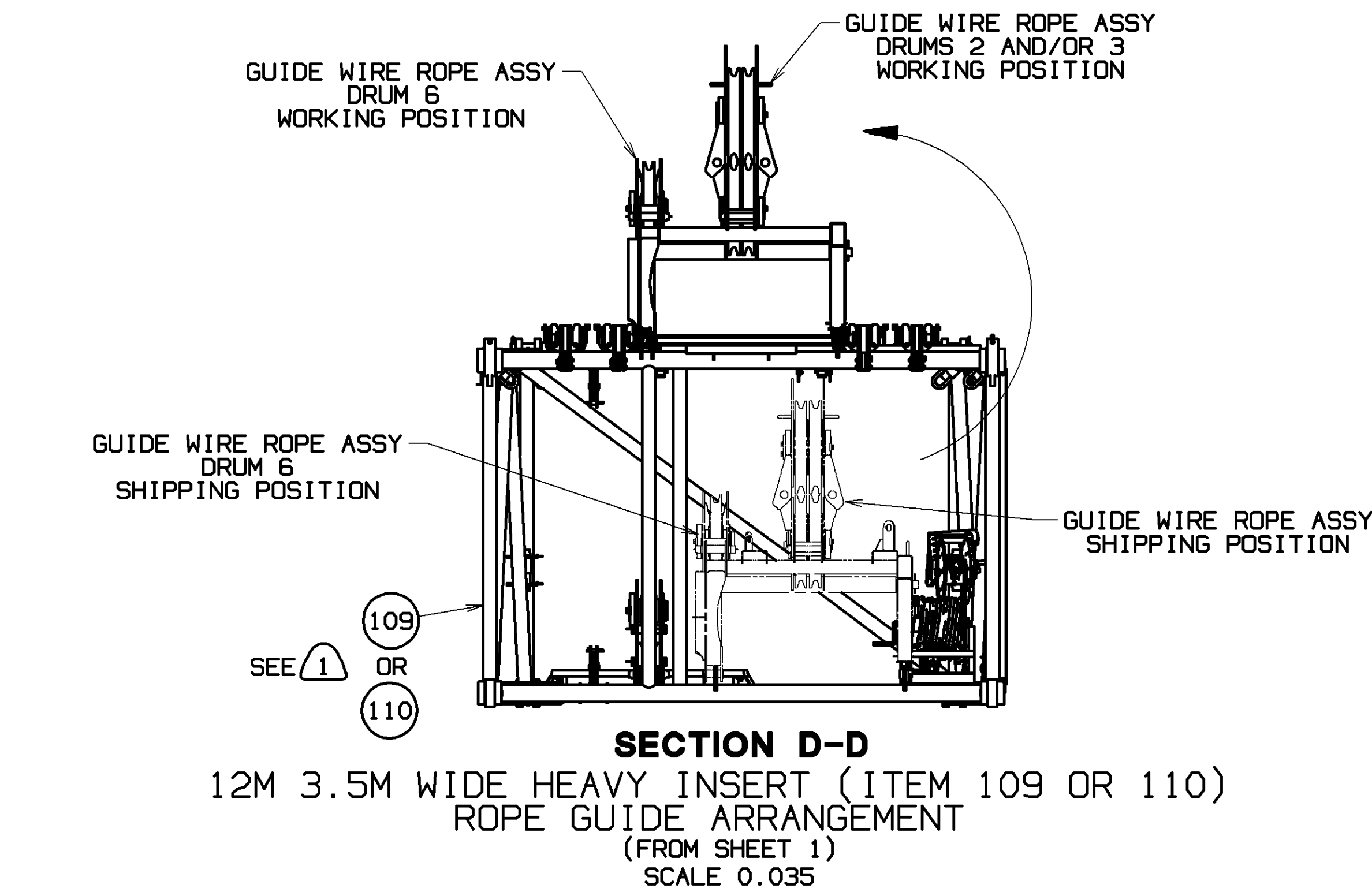
- WIRE ROPE GUIDE PARTS IN THIS INSERT ARE REQUIRED FOR USE OF AUXILIARY DRUMS #2, #3 AND #6. WHEN DRUMS #2, #3 AND #6 ARE NOT USED OR ARE NOT PRESENT, ROPE GUIDE MAY REMAIN IN SHIPPING POSITION DURING OPERATION.
- WIRE ROPE GUIDE ASSY'S FOR DRUMS #2, #3 AND #6 CAN BE REUSED FROM 12M INSERT ITEM 100 (81027803), IF AVAILABLE.
- TOP 10.0M I.D. TAG #81027720
- INSERT 12.00M HEAVY I.D. TAG #81027804. SEE OPTIONAL I.D. TAG TABLE. SEE DELTA NOTE 26.
- BUTT 8.0M I.D. TAG #81028037
- INSERT 12.00M MEDIUM I.D. TAG #81027809. SEE OPTIONAL I.D. TAG TABLE.
- INSERT 12.00M MEDIUM W/EQUALIZER I.D. TAG #81027812. SEE OPTIONAL I.D. TAG TABLE.
- INSERT 12.00M LIGHT I.D. TAG #81027815. SEE OPTIONAL I.D. TAG TABLE.
- INSERT 12.00M LIGHT W/SUSPENSION I.D. TAG #81027818. SEE OPTIONAL I.D. TAG TABLE.
- INSERT 6.00M MEDIUM I.D. TAG #81027821. SEE OPTIONAL I.D. TAG TABLE.
- REFER TO CAPACITY CHART IF JIB BACKSTAY STRAPS, LINKS AND RETAINING HARDWARE REMAIN ON BOOM ASSY. (SEE VIEW E-E ON SHEET 3)
- 96.0M (315.0 FT) THRU 126.0M (413.4 FT) BOOM REQUIRES DROP-DOWN INTERMEDIATE SUSPENSION ITEM 106. REFER TO BOOM LENGTH TABLE (SHEET 2) FOR SUSPENSION PENDANT BUTTON NUMBER. SEE SHEET 10 FOR OPERATIONAL INSTRUCTIONS.
- UPPER POINT ASSY I.D. TAG #81029770. MAY BE EQUIPPED WITH ROLL ASSY 81036285 (CALLED FOR ON UPPER POINT ASSY FRAME ITEM 300 AS OPTION 7).
- BOOM STRAPS & LINKS ON 12M HEAVY INSERT (ITEM 109 OR 110) AND 12M EQUALIZER INSERT (ITEM 6) UP TO EQUALIZER (R9) MAY REMAIN ON INSERTS DURING WORKING CONDITIONS. (SEE DETAIL 6 ON SHEET 4).
- STOWED UNUSED BOOM STRAPS, LINKS & HARDWARE PER DELTA NOTES 13 & 14 ARE NOT ACCOUNTED FOR IN BOOM LENGTH TABLE ON SHEET 2.
- STOWS IN PARTS BOX 81028769 AS OPTION EQUIPPED.
- SEE BLOCK REEVING DRAWING 81038141 FOR 1 DRUM RIGGING CONFIGURATION OPTIONS AND INSTRUCTIONS. SEE RIGGING WINCH ASSY 81024072 FOR BLOCK AND WIRE ROPE ASSEMBLY.
- SEE BLOCK REEVING DRAWING 81038142 FOR 2 DRUM RIGGING CONFIGURATION OPTIONS AND INSTRUCTIONS. SEE RIGGING WINCH ASSY 81024072 FOR BLOCK AND WIRE ROPE ASSEMBLY.
- CALLED FOR ON TOP ASSY ITEM 1 AS OPTION 1 EQUIPPED.
- CALLED FOR ON TOP ASSY ITEM 1 AS OPTION 2 EQUIPPED. FOR SHEAVE CONFIGURATION REFER TO VIEW C-C ON SHEET 6.
- CALLED FOR ON TOP ASSY ITEM 1 AS OPTION 3 EQUIPPED. FOR SHEAVE CONFIGURATION REFER TO VIEW C-C ON SHEET 6.
- ITEM R401 (84028327) CONSISTS OF LINK 84028318 AND PENDANT 277436 UTILIZED FOR TANDEM DRUM REEVING. (SEE REEVING DRAWING 81038142). LINK 84028318 STOWS IN PARTS BOX 81028769 AS OPTION 2. PENDANT 277436 STOWS ON #500 BOOM BUTT ASSY ITEM 3 (81028036).
- FOR ASSEMBLY AND RIGGING PURPOSE ONLY. STOWS IN PARTS BOX 81028769 AS SELF RIGGING KIT 81038439.
- MAST RIGGING M11:503 (R3) CONTAINS MAST BUTT ASSY 84041201 WITH "ACTIVE" FIXED MAST STOP.
- SUSPENSION PENDANT MAY APPEAR SLACK DURING RAISING AND OPERATION. CHECK SUSPENSION LOCATION AND PENDANT BUTTON NUMBER AND CONTINUE OPERATION.
- ALL WIRE ROPE GUIDE ASSY'S IN 12M INSERT ITEM 100 (81027803) MUST BE REMOVED DURING BOOM OPERATION.
- INSERT 12.00M HEAVY I.D. TAG #80110939.
- INSERT 12.00M HEAVY W/SHEAVES I.D. TAG #80110940.
- INSERT 12.00M HEAVY W/EQUALIZER I.D. TAG #84051324.
- FOR BOOM STRAP COMPONENTS ON OPTIONAL INSERT REFER TO BOOM LENGTH TABLE ON SHEET 2.
- IF INSERT ITEMS 1, 100, 101, 102, 103, 104 & 105 ARE SUPPLIED WITH 1 HOLE PIN W/HD (ITEM R114) INSTEAD OF ITEM R116, THEN ONLY (1) SAFETY PIN (ITEM R115) IS REQUIRED PER PIN ITEM R114.

- P/N 81029670 ITEMS R10 & R25 ARE IDENTICAL. ITEM R10 IS ALWAYS REQUIRED. ITEM R25 REPLACES ITEM R11 ON LATER TOP ASSY'S ITEM 1.
- REPLACE (4) EXISTING STRAP LINKS ITEM R102 WITH (4) SUSPENSION LINKS R117 ON SUSPENSION WIRE ROPE ITEM 106. (SEE SUSPENSION ASSEMBLY SEQUENCE ON SHEET 10).
- QUANTITIES OF LINK (ITEM R102) IN BOOM LENGTH TABLE (SHEET 2) REFLECT REMOVAL OF LINKS ITEM R102 PER DELTA NOTE 33.
- QUANTITIES OF LOWER CONNECTOR PINS ITEM R114 & R116 AND SAFETY PINS ITEM R115 IN BOOM LENGTH TABLE (SHEET 2) REFLECT THE NON-USE OF THESE COMPONENTS AT JOINT WHERE SUSPENSION WIRE ROPE ITEM 106 IS USED.
- THESE COMPONENTS ON WIRE SUSPENSION ITEM 106 CAN BE REUSED FROM INSERT ASSY #500 W/SUSPENSION ITEM 4 IF AVAILABLE.
- INSERT 12.00M HEAVY W/SHEAVES I.D. TAG #80111377.
- INSERT 12.00M HEAVY I.D. TAG #80111381.

BILL OF MATERIAL				ASSEMBLY USED ON	
ITEM NO.	QTY	DESCRIPTION	MATERIAL	ITEM NO.	81023943
BOOM RIGGING B65:505-500					
1	1	TOP ASSY #500, 10.0 M		2	
2					
3	1	BUTT ASSY #500 8.00 M		4	
4					
5					
6	1	INSERT ASSY #505 12M H		29	
NO. REQ'D FOR THE FOLLOWING ITEMS ARE IN THE BOOM LENGTH TABLE					
100		INSERT ASSY 12M H #500		81027803	3
101		INSERT ASSY 12M #500		81027808	5
102		INSERT ASSY 12M EQ M #500		81027811	6
103		INSERT ASSY 12M #500 L		81027814	7
104		INSERT ASSY #500 12M W/SUSP		81027817	8
105		INSERT ASSY 6M #500		81027820	9
106		SUSPENSION WIRE ROPE		84051095	11
107		GUIDE ASSY		84048777	
108		INSERT ASSY #505/500 12M H		84047995	27
109		INSERT ASSY 12M H #500/505		84048000	28
110		INSERT ASSY #500/505 12M H		80111376	37
111		INSERT ASSY #505/500 12M H		80111380	38
OPTION 1: HOOK BLOCKS					
200	1	BLOCK 350 US TON 32MM 9 SHEAVES		A08833	
201	1	BLOCK HOOK 250MT 28MM WR 7 SHEAVES		81031978	
202	1	BLOCK HOOK 170MT 28MM WR 5 SHEAVES		81031981	
203	1	BLOCK HOOK 100MT 28MM WR 3 SHEAVES		81031987	
204	1	WEIGHT BALL SWIVEL 22.2MT, 28MM & 32MM WR		81033344	
205	1	BLOCK HOOK 45 TON/41 MTON 1.12 DIA WR 1 SHEAVE		236503	
206					
OPTION 2: UPPER BOOM POINT					
300	1	UPPER POINT ASSY FRAME		81029769	12
301					
BASIC REFERENCE ITEMS					
R1					
R2	2	LOAD CELL LINK 145.150 KGS		84038493	
R3	1	MAST RIGGING M11:503		84045340	24
R4					
R5	2	STRAP 7.69M #500		81027399	
R6					
R7	4	LINK #500 BOOM		81028035	
R8	4	LINK #500 BOOM		81028043	
R9	1	EQUALIZER ASSY		81029025	
R10	2	PIN 1 HOLE W/HD 100.0 DIA X 94.3 LG		81029670	32
R11	2	PIN WITH HEAD 100.0 DIA X 336.7 LG		84020672	32
R12	4	PIN 1 HOLE W/HD 69.5 DIA X 94.3 LG		81029688	
R13	4	COLLAR 70.50MM I.D.		81029689	
R14	4	PIN 2 HOLE 12.7 DIA X 98.0 LG		81029708	
R15	4	LINK EQ TO BOOM STRAP		81036487	
R16					
R17					
R18	4	COLLAR 101MM I.D.		A12945	84050216
R19	4	PIN 2 HOLE 12.7 DIA X 128.0 LG		A12946	SHT 1 OF 10
R20					
R21					
R22	1	POINT #500, LOWER ASSY		81027736	19
R23	1	SHEAVE ASSY #500 LWR PT DE		81034794	20
R24	1	SHEAVE ASSY #500 LOWER PNT		81034795	21
R25	2	PIN 1 HOLE W/HD 100.0 DIA X 94.3 LG		81029670	32
R26					
NO. REQ'D FOR THE FOLLOWING REFERENCE ITEMS ARE IN THE BOOM LENGTH TABLE (SHEET 2)					
R100		PIN COTTER 3/16 DIA X 1.50 LG		562085	
R101		PIN 1 HOLE W/HD 65.0 DIA X 94.3 LG		81024951	
R102		LINK #500 BOOM		81024955	
R103		STRAP 11.78M #500		81027401	
R104		STRAP 5.78M #500		81029621	
R105		STRAP .68M #500		81032002	
R106		STRAP 10.22M #500		81032003	
R107		LINK #500 SUSPENSION		81032170	
R108		LINK #500 BOOM		81032298	
R109		STRAP 8.07M #500		81036552	
R110		STRAP 1.69M #500		81036553	
R111		LINK #500 BOOM		81036554	
R112		PIN 2 HOLES 12.7 DIA X 93.0 LG		A11799	
R113		COLLAR 68MM I.D.		A11800	
R114		PIN 1 HOLE W/HD 75.80 DIA X 160.4 LG		A13294	31
R115		PIN SAFETY .243 OD X 5.00		563640	
R116		PIN 2 HOLE 75.80 X 171.9 LG		84026091	
R117		LINK SUSPENSION		84051117	33
REFERENCE ITEMS FOR ASSEMBLY AND RIGGING PURPOSE ONLY					
R200					
R201					
R202					
R203	2	SLING 50000 LBS 6.15 FT		84018961	16
R204	4	SLING 13.0 (FT) 40000 (LBS)		84028655	23
R205	4	SHACKLE 25MT		624759	23
R206					
R207	4	SLING LIFTING 1 LEG X 40000(LBS) X 9.0(FT)		81038423	23
R208	4	SHACKLE 20.5T SLING		81041163	23
REFERENCE OPTION 3: SINGLE REEVING					
R300	1	LINK ASSY DEAD END		81042356	16
REFERENCE OPTION 4: TANDEM REEVING					
R400	1	LINK ASSY DEAD END		81042356	16
R401	1	PENDANT ASSY DEAD END		84028327	22
PRIVATE LABELING REQUIREMENT TO CONFORM TO ENGINEERING SPECIFICATION 8629103794 FOR COMPONENTS LISTED IN 862900-06-006					
DATE 03-27-19					
REV. LVL. A					
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TOLERANCE UNLESS OTHERWISE SPECIFIED					
DECIMAL PLACES FRACTIONS					
ALL DIMENSIONS UNLESS OTHERWISE SPECIFIED					
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MANITOWOC CRANES, INC. BOOM RIGGING B65:505-500					
APP. JRR					

15 ITEMS REQ'D FOR VARIOUS BOOM LENGTHS - SEE SHEETS 3, 4 & 5 FOR BOOM MAKE-UP																												BILL OF MATERIAL				ASSEMBLED USED ON
ITEM NO.		HEAVY			MEDIUM			LIGHT		STRAP						LINK					PIN		COTTER	COLLAR	SUSPENSION	LOWER CONN PIN	SAFETY PIN	GUIDE	REVISIONS			
		108 OR 111	109 OR 110	100	101	102	105	103	104	R103	R104	R105	R106	R109	R110	R102	R107	R108	R111	R117	R101	R112	R100	R113	106 25	R114 AND /OR R116	R115	107				
BOOM LENGTH		INSERT 12M (39.4FT) 505/500	INSERT 12M (39.4FT) 500/505 W/SHEAVE	INSERT 12M (39.4FT) ASSY	INSERT 12M (39.4FT) ASSY	INSERT 12M (39.4FT) EQ ASSY	INSERT 6M (19.7FT) ASSY	INSERT 12M (39.4FT) ASSY	INSERT 12M (39.4FT) SUSP ASSY	STRAP 12M (39.4FT)	STRAP 6M (19.7FT)	STRAP SHORT W/SUSP	STRAP LONG W/SUSP	STRAP LONG W/EQUAL	STRAP SHORT W/EQUAL	LINK SEE 34	LINK CONNECT W/SUSP	LINK W/SUSP	LINK W/EQUAL	LINK CONNECT W/SUSP	PIN	PIN	COTTER	COLLAR	PENDANT BUTTON NUMBER SEE 41	PIN SEE 35	SAFETY PIN SEE 31 35	WIRE ROPE GUIDE UPPER				
METERS	FEET																															
54	177.2	1	1	0	0	0	0	0	0	2	0	0	0	0	2	8	0	0	0	0	12	12	40	12	-	8	16	0				
60	196.9	1	1	0	0	0	1	0	0	2	2	0	0	0	2	12	0	0	0	0	16	16	48	16	-	10	20	0				
66	216.5	1	1	1	0	0	0	0	0	4	0	0	0	0	2	12	0	0	0	0	16	16	48	16	-	10	20	0				
72	236.2	1	1	1	0	0	1	0	0	4	2	0	0	0	2	16	0	0	0	0	20	20	56	20	-	12	24	0				
78	255.9	1	1	1	OR 0 1 1 0	0	0	0	0	4 6 6 6	0	0	0	2 0 0 2	4 2 2 2	16	0	0	4 0 0 0	0	24 20 24 20	24	64 56 20 20	24	-	12	24	0				
84	275.6	1	1	1	OR 0 1 1 0	1	0	0	0	4 6 6 6	2	0	0	2 0 0 2	4 2 2 2	20	0	0	4 0 0 0	0	28 24 24 24	28	72 64 28 24	28	-	14	28	0				
90	295.3	1	1	1	OR 1 1 2 0	0	0	0	0	6 8 8 8	0	0	0	2 0 0 2	4 2 2 2	20	0	0	4 0 0 0	0	28 24 24 24	28	72 64 24 24	28	-	14	28	0				
96	315.0	1	1	1	OR 1 1 2 0	1	0	0	0	6 8 8 8	2	0	0	2 0 0 2	4 2 2 2	20	0	0	4 0 0 0	4	32 28 32 28	32	80 72 28 28	32	3	14	28	0				
102	334.6	1	1	1	OR 2 1 3 0	0	0	0	0	8 10 10 10	0	0	0	2 0 0 2	4 2 2 2	20	0	0	4 0 0 0	4	32 28 32 28	32	80 72 28 28	32	4	14	28	0				
108	354.3	1	1	1	OR 2 1 3 0	1	0	0	0	8 10 10 10	2	0	0	2 0 0 2	4 2 2 2	24	0	0	4 0 0 0	4	36 32 32 32	36	88 80 32 32	36	4	16	32	1				
114	374.0	1	1	1	OR 2 1 3 0 OR 2 1 3 0	0	0	0	0	8 12 10 10 10 10	0	2	2	2 0 0 2 0 2	4 2 2 4 2 4	28 24 24 24 28 28	2 0 0 0 2 0	4 0 0 4 4 0	4	44 32 32 36 40 40	44	44 80 36 88 40 96	44	4	16	32	1					
120	393.7	1	1	1	OR 2 1 3 0 OR 2 1 3 0	1	0	0	0	8 12 10 10 10 10	2	2	2	2 0 0 2 0 2	4 2 2 4 2 4	32 28 28 28 32 32	2 0 0 0 2 0	4 0 0 4 4 0	4	48 36 36 40 44 44	48	48 88 36 96 104 44	48	4	18	36	1					
126	413.4	1	1	1	OR 2 1 3 0 OR 2 1 3 0	0	0	0	0	10 14 12 12 12 12	0	2	2	2 0 0 2 0 2	4 2 2 4 2 4	32 28 28 28 32 32	2 0 0 0 2 0	4 0 0 4 4 0	4	48 36 36 40 44 44	48	48 88 36 96 104 44	48	4	18	36	1					





RECOMMENDED BOOM MAKEUP
FOR TYP PIN JOINT SEE SECTION B-B
AND DETAILS H, J & K

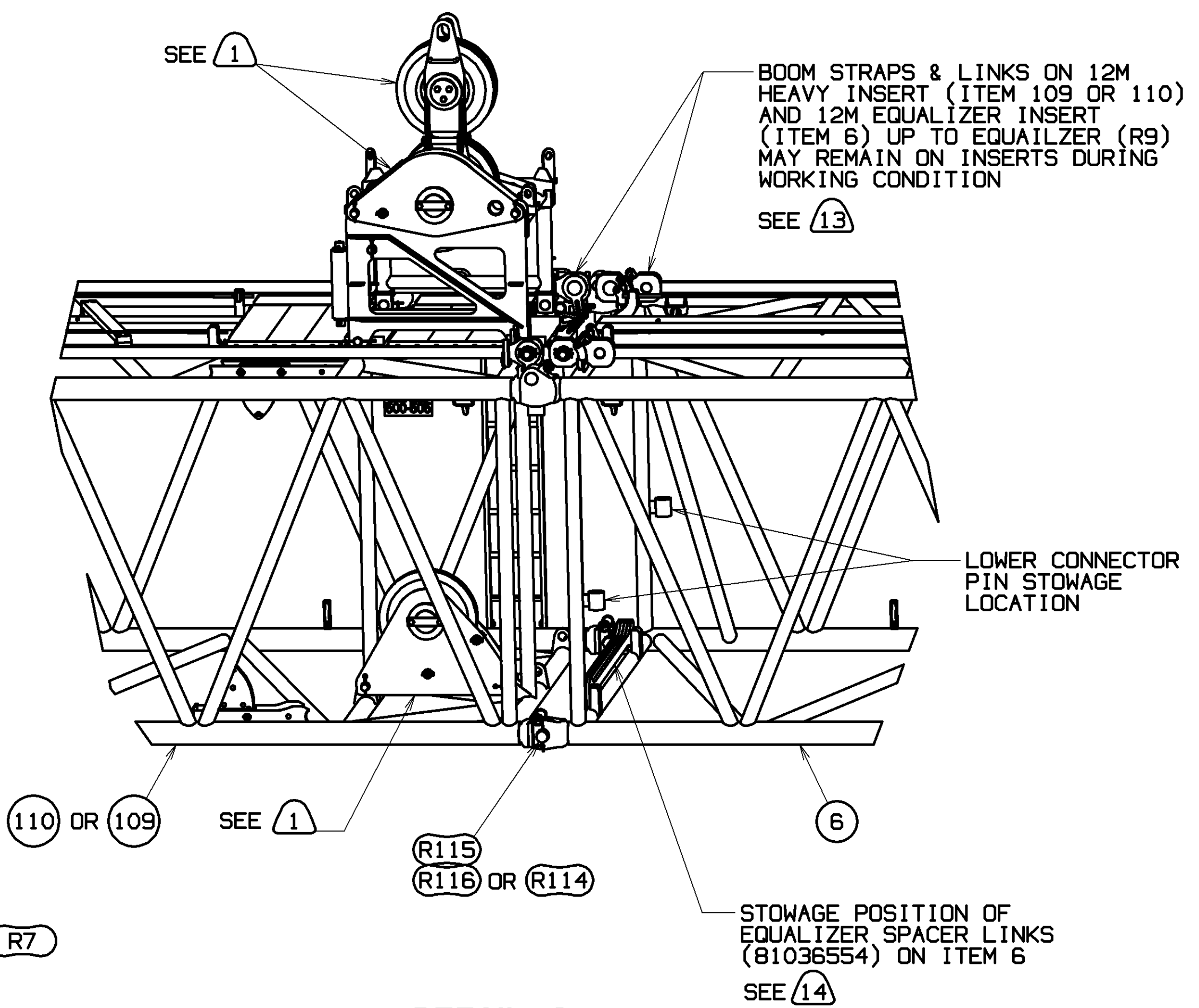
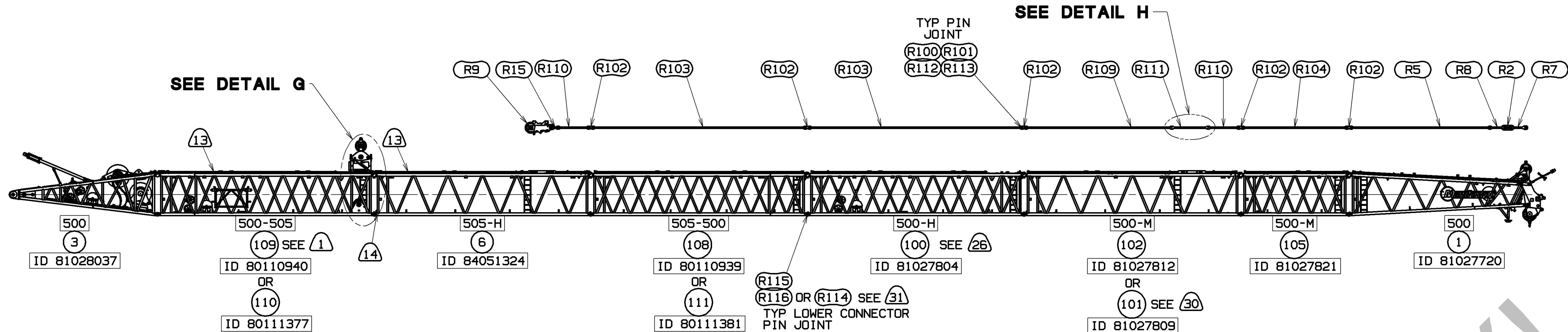
DO NOT SCALE THIS DRAWING

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DECIMAL PLACES	±	10 FEET	±	10 FEET	±	10 FEET	±	DR. RHV	Manitowoc, Wisconsin	B65:505-500	
(1) PLACE 0.0	±.12	±.18	±.05	±.05	±.05	±.05	±.05	CK. TRG	MODEL MLC300		
(2) PLACE 0.00	±.06	±.12	±.015	±.015	±.015	±.015	±.015	APP. JRR			
(3) PLACE 0.000	±.006	±.012	±.006	±.006	±.006	±.006	±.006				
ANGLES	±	1°	±	1°	±	1°	±				

BILL OF MATERIAL				ASSEMBLIES USED IN
ITEM NO.	DESCRIPTION	QUANTITY	MATERIAL	DATE

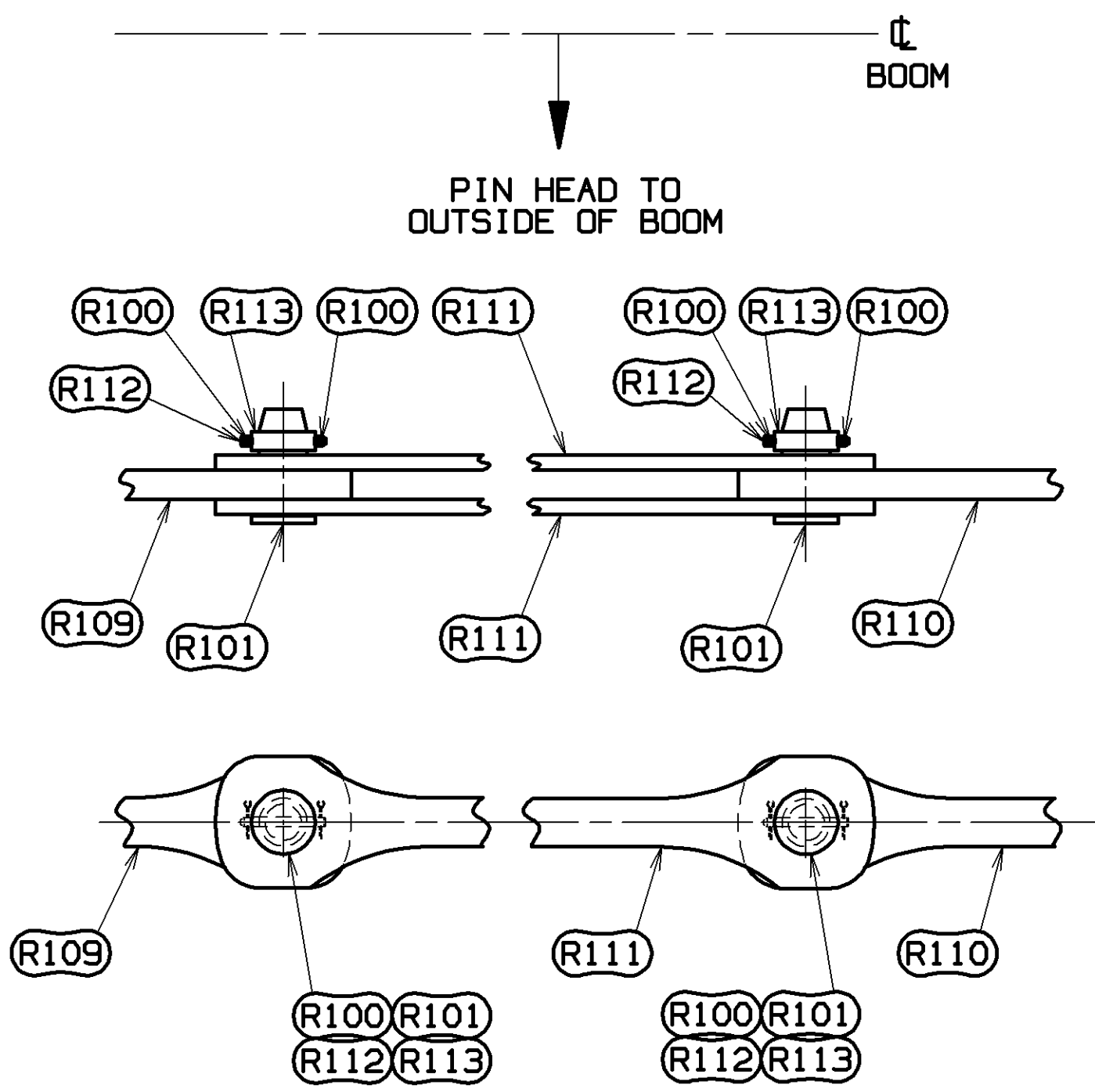
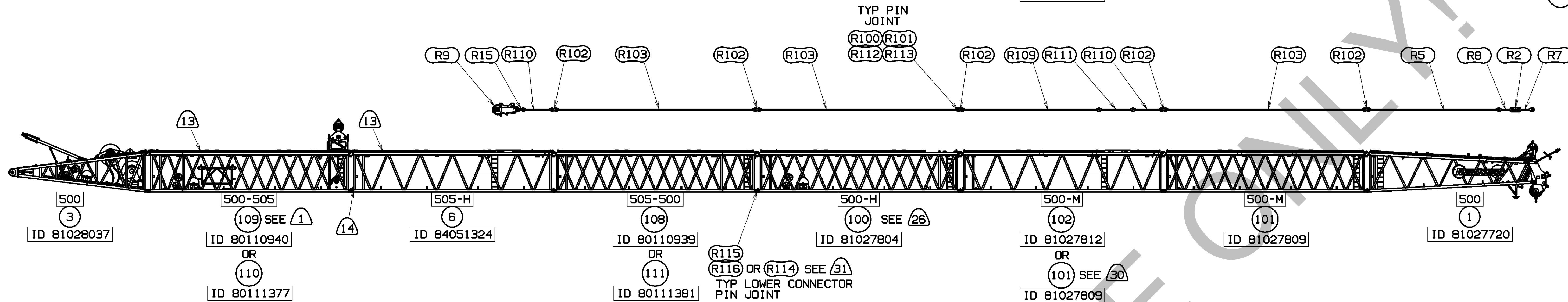
REVISIONS

84.0 M
(275.6 FT)



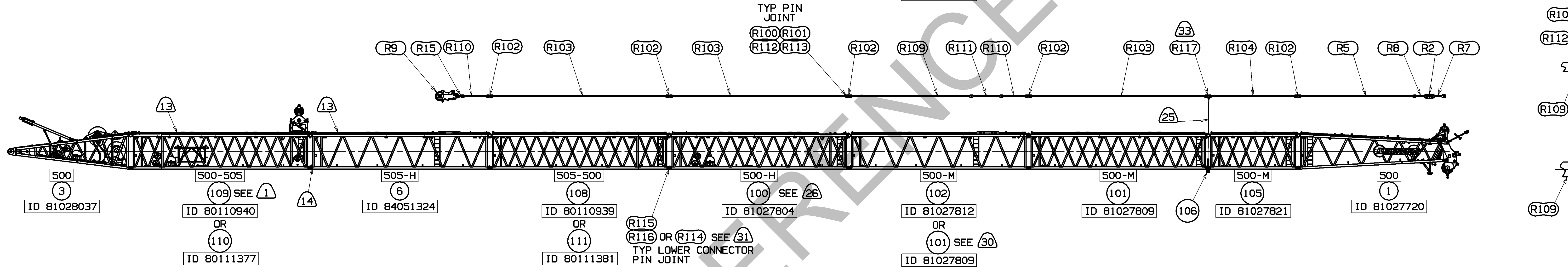
DETAIL G
SEE DELTA NOTES 13, 14 & 15
SCALE 0.040

90.0 M
(295.3 FT)

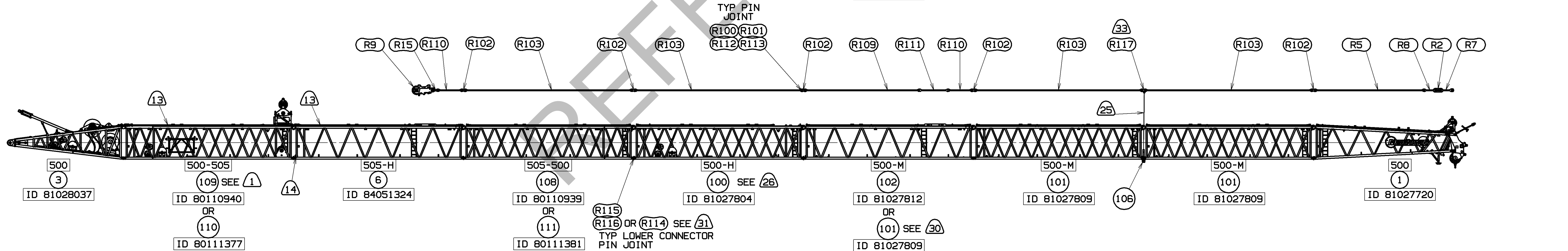


DETAIL H
SCALE 0.125

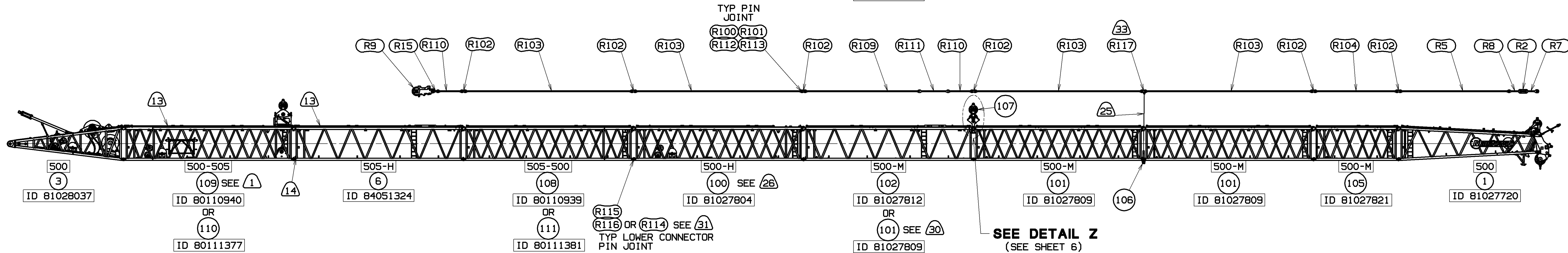
96.0 M
(315.0 FT)



102.0 M
(334.6 FT)



108.0 M
(354.3 FT)



SEE DETAIL Z
(SEE SHEET 6)

RECOMMENDED BOOM MAKEUP
FOR TYP PIN JOINT SEE SECTION B-B
AND DETAILS H, J & K

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DECIMAL PLACES		FABRICATION		MACHINING		WELDING		DR. RHV		CK. TRG		APP. JRR		MODEL MLC300		BOOM RIGGING		REV. 12/12							
(1) PLACE 0.0		±.02		±.04		±.06		±.08		±.10		±.12		±.15		±.18		±.20		A					
(2) PLACE 0.00		±.02		±.04		±.06		±.08		±.10		±.12		±.15		±.18		±.20		B					
(3) PLACE 0.000		±.002		±.004		±.006		±.008		±.010		±.012		±.015		±.018		±.020		C					
ANGLES		1°		2°		3°		4°		5°		6°		7°		8°		9°		D					

PRIVATE LABELING
REQUIREMENT TO
CONFORM TO
SPECIFICATION
8629103794 FOR
COMPONENTS LISTED
IN 862900-06-006

DATE
03-27-19

REV. LVL.
A

84050216
SHT 4 OF 10

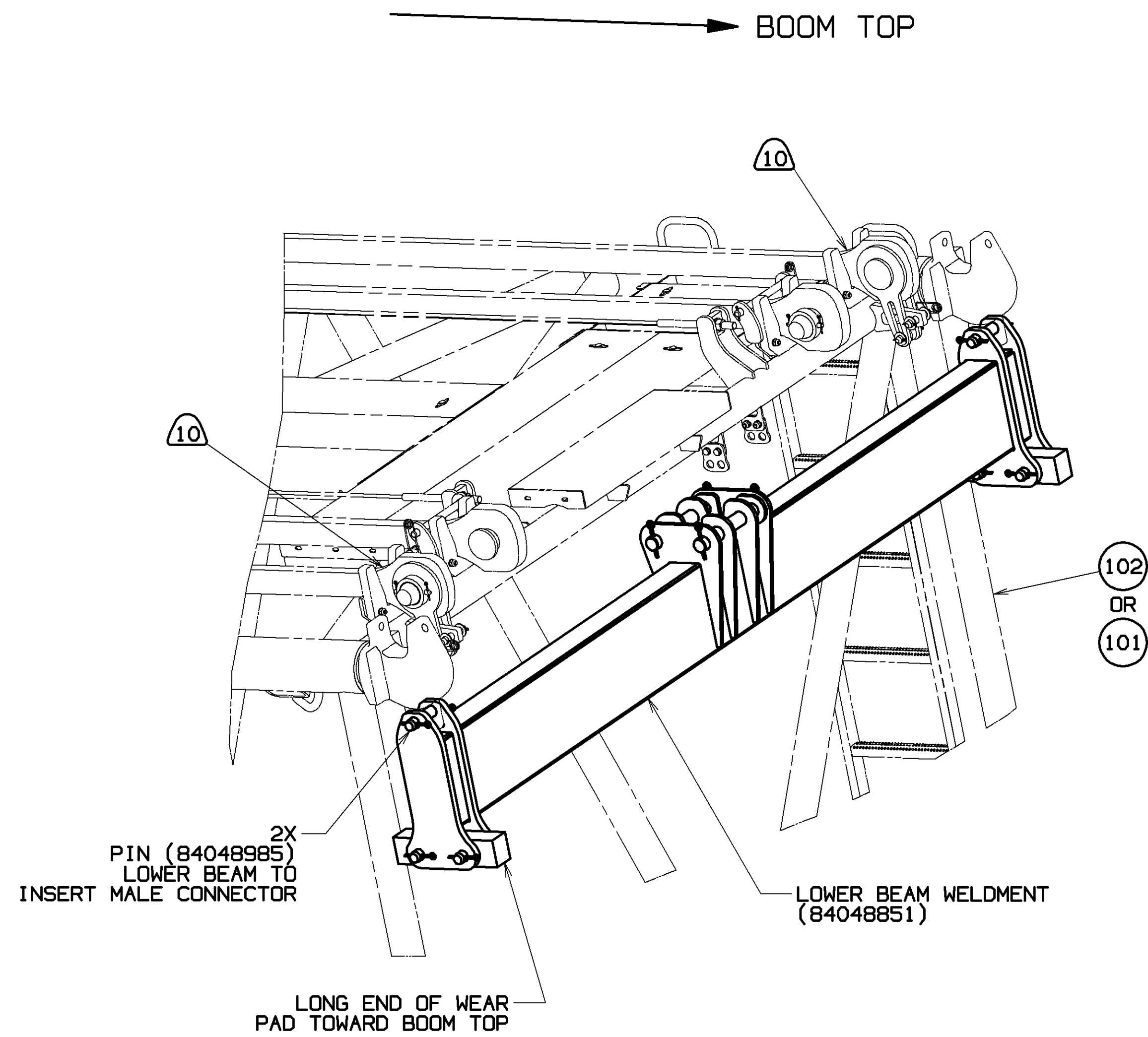


Dwg. No.

SHT 5 OF 10

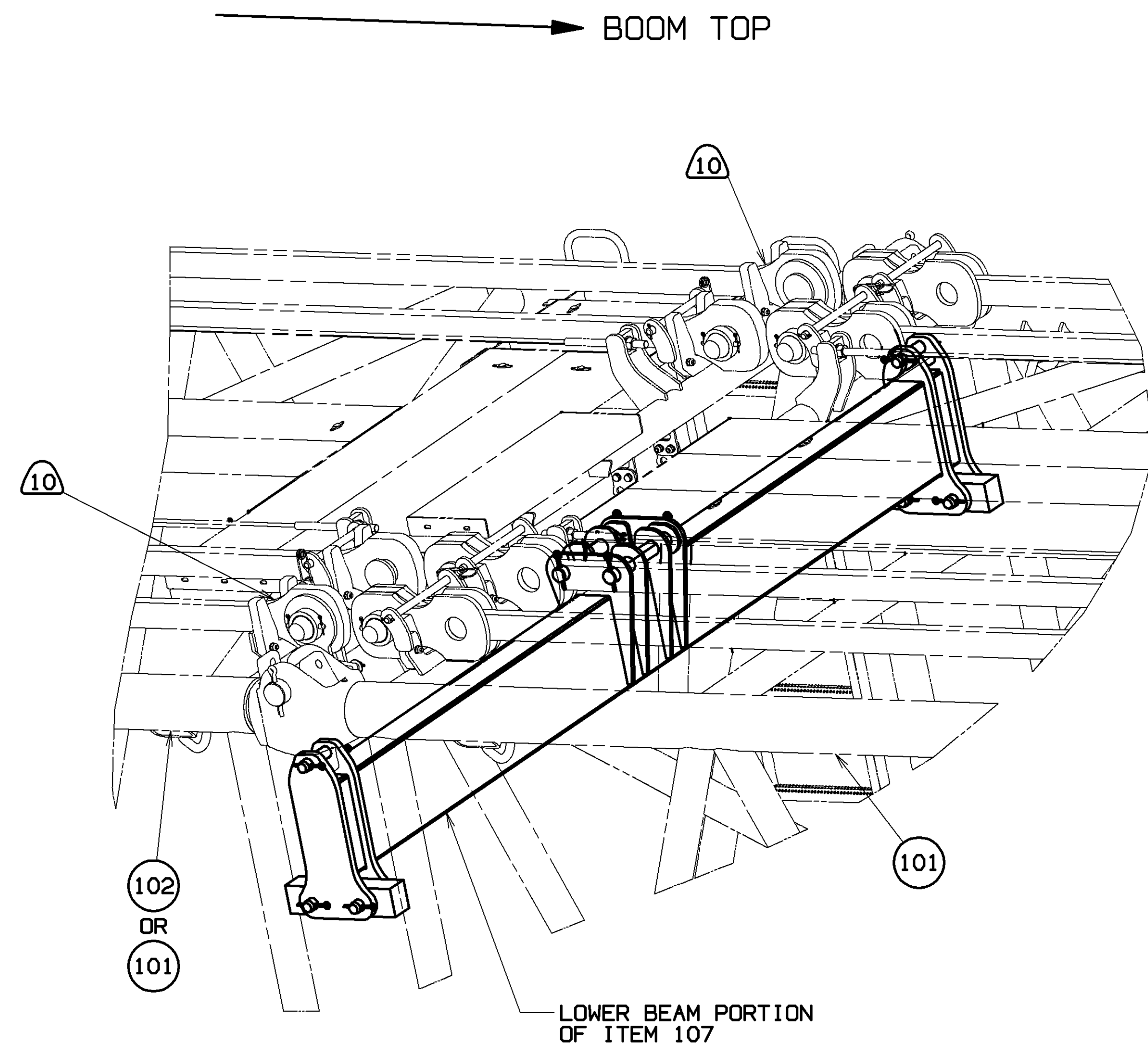


DWG. NO.
84050216



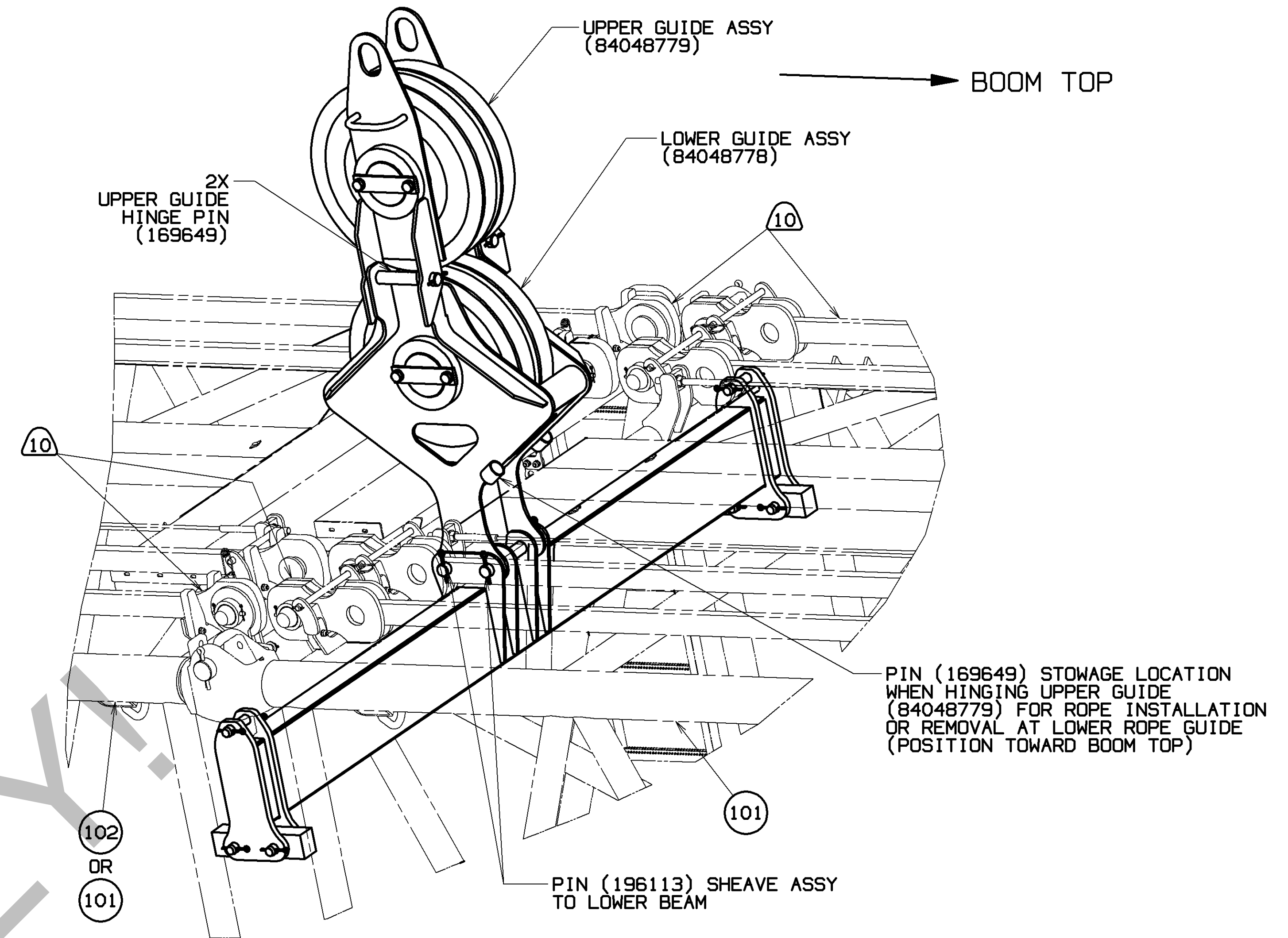
STEP 1 - LOWER BEAM TO INSERT ASSY

INSTALL LOWER BEAM PORTION OF ITEM 107 TO MALE CONNECTOR FIXTURE HOLES ON #500 12M INSERT (ITEM 101 OR 102) WITH LOWER BEAM PINS (84048985). (POSITION LONG END OF WEAR PADS TOWARD BOOM TOP).



STEP 2 - #500 BOOM INSERT (ITEM 101) INSTALLATION

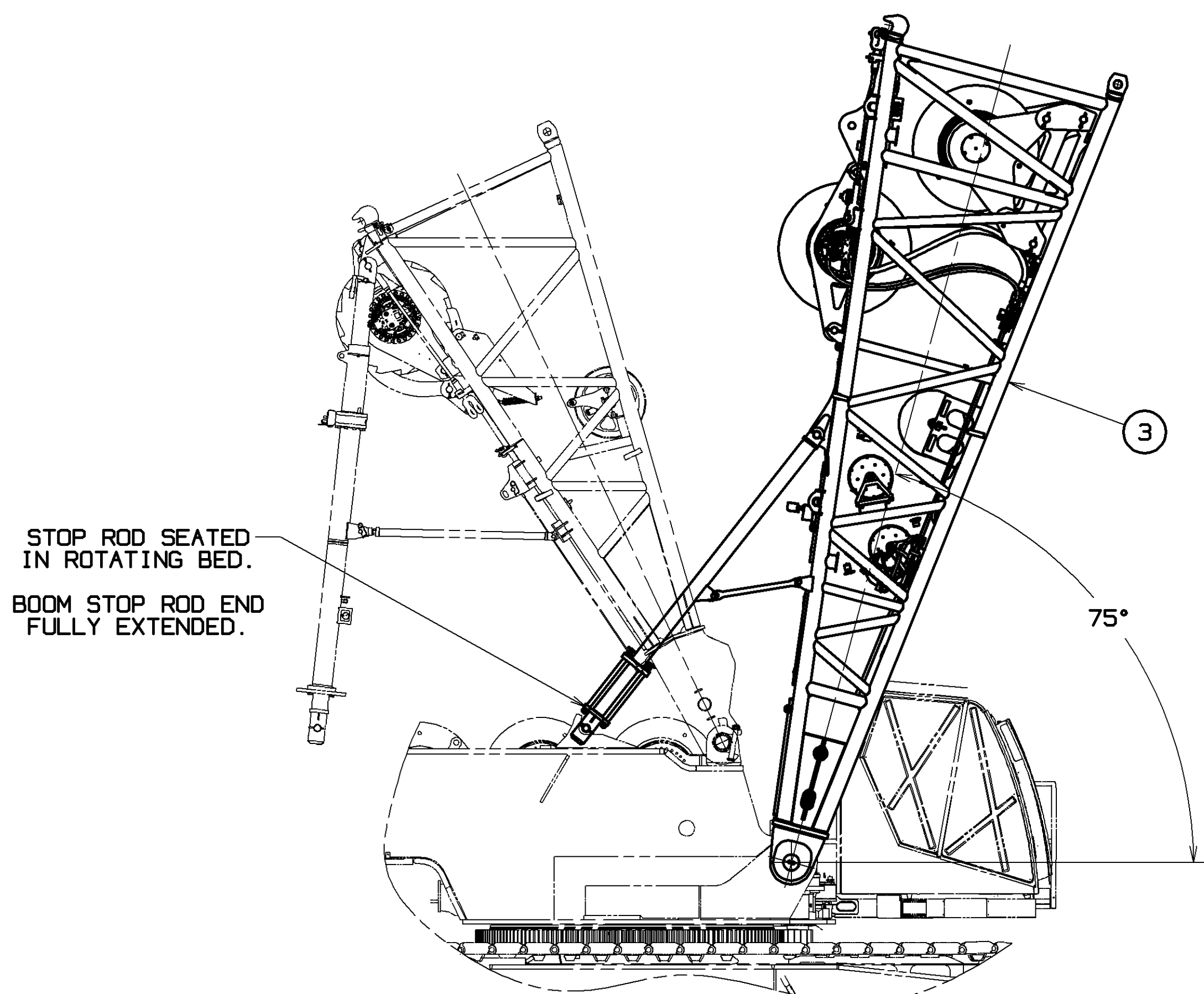
ASSEMBLE #500 12M INSERT (ITEM 101) TO #500 12M INSERT (ITEM 101 OR 102) PER TYPICAL INSERT INSTALLATION. INSTALL LOWER BOOM CONNECTOR PINS. (SEE DETAIL M ON SHEET 8).



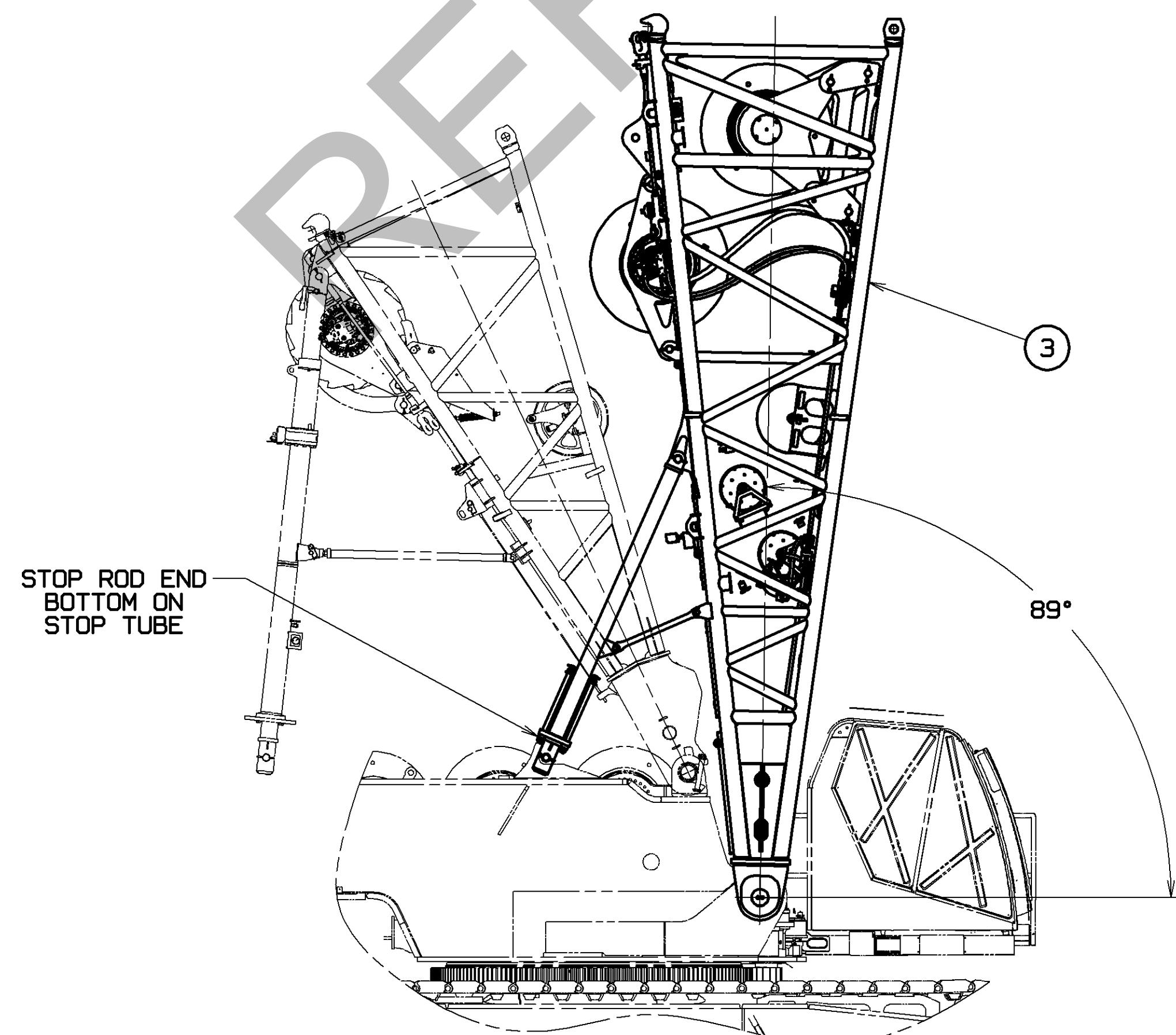
STEP 3 - UPPER AND LOWER GUIDE ASSEMBLY INSTALLATION

INSTALL UPPER (84048779) AND LOWER (84048778) SHEAVE ASSEMBLY TO LOWER BEAM (84048851) AND ATTACH WITH PINS (196113). (POSITION LOWER GUIDE ASSY WITH PIN STOWAGE HOLDERS TOWARD BOOM TOP).

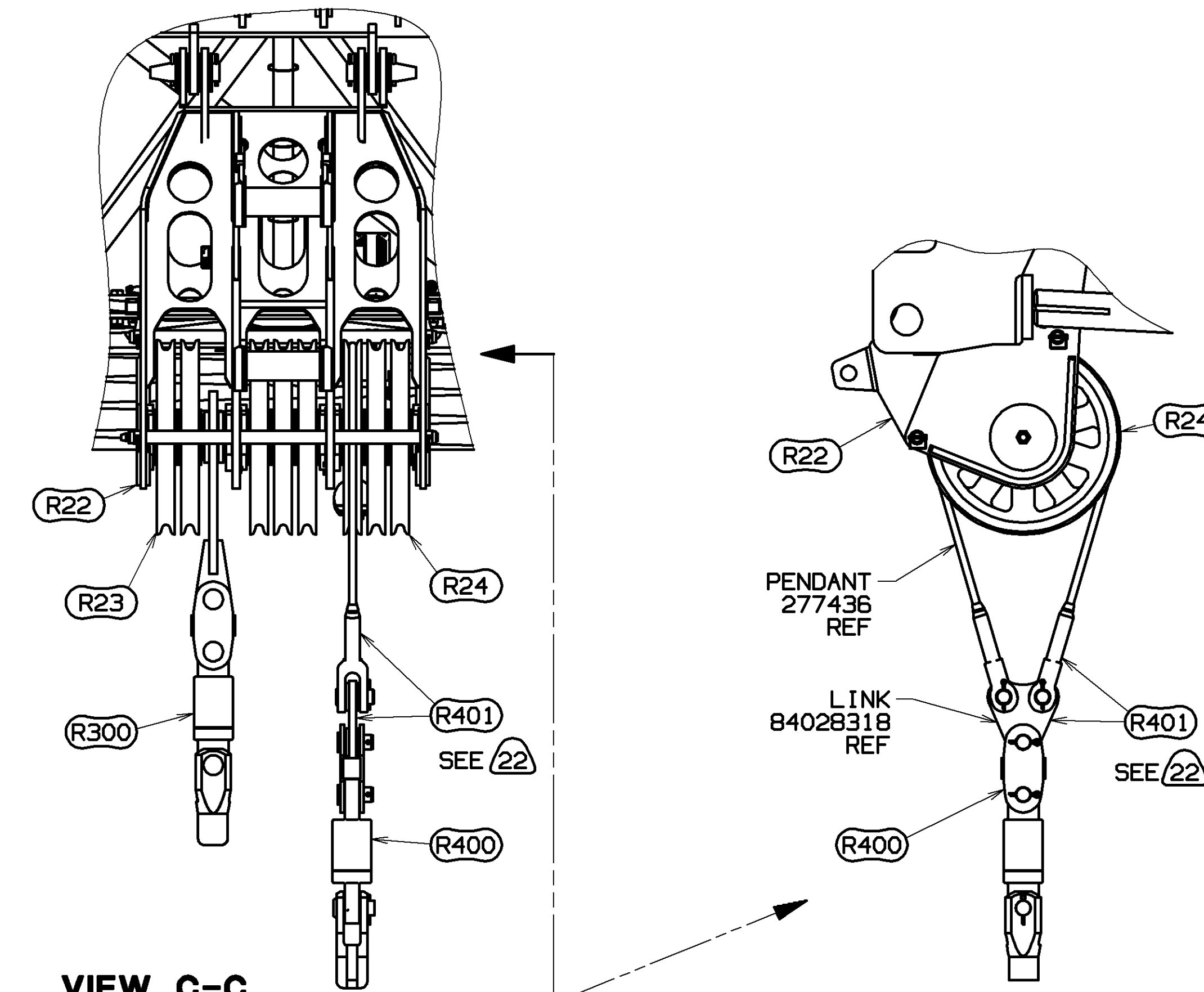
DETAIL Z
ENCAPSULATING SHEAVE (ITEM 107) INSTALLATION
(FROM SHEET 4)
SCALE 0.100



BOOM STOP
START OF CUSHION
SCALE 0.025

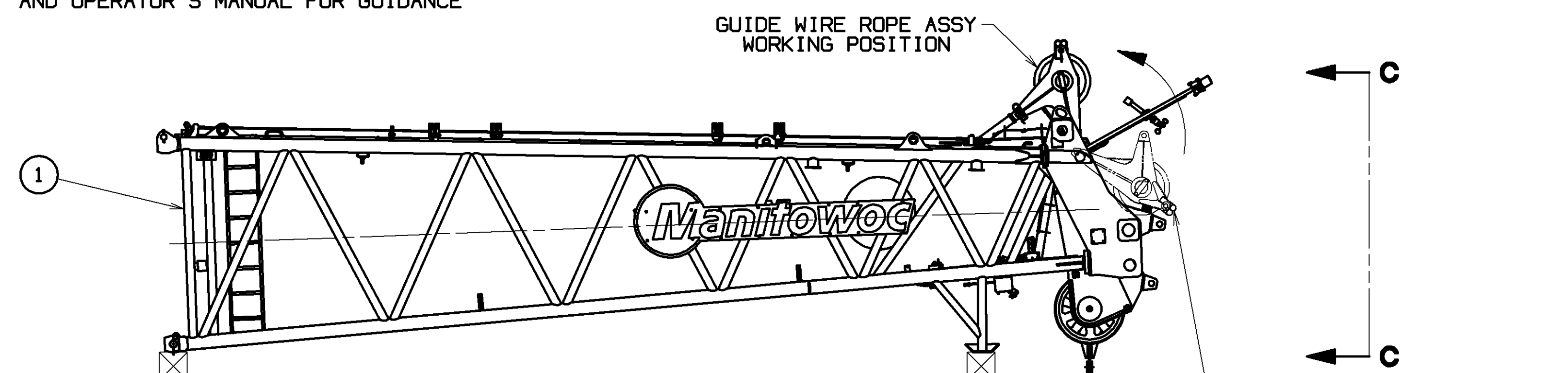


BOOM STOP
PHYSICAL STOP
SCALE 0.025

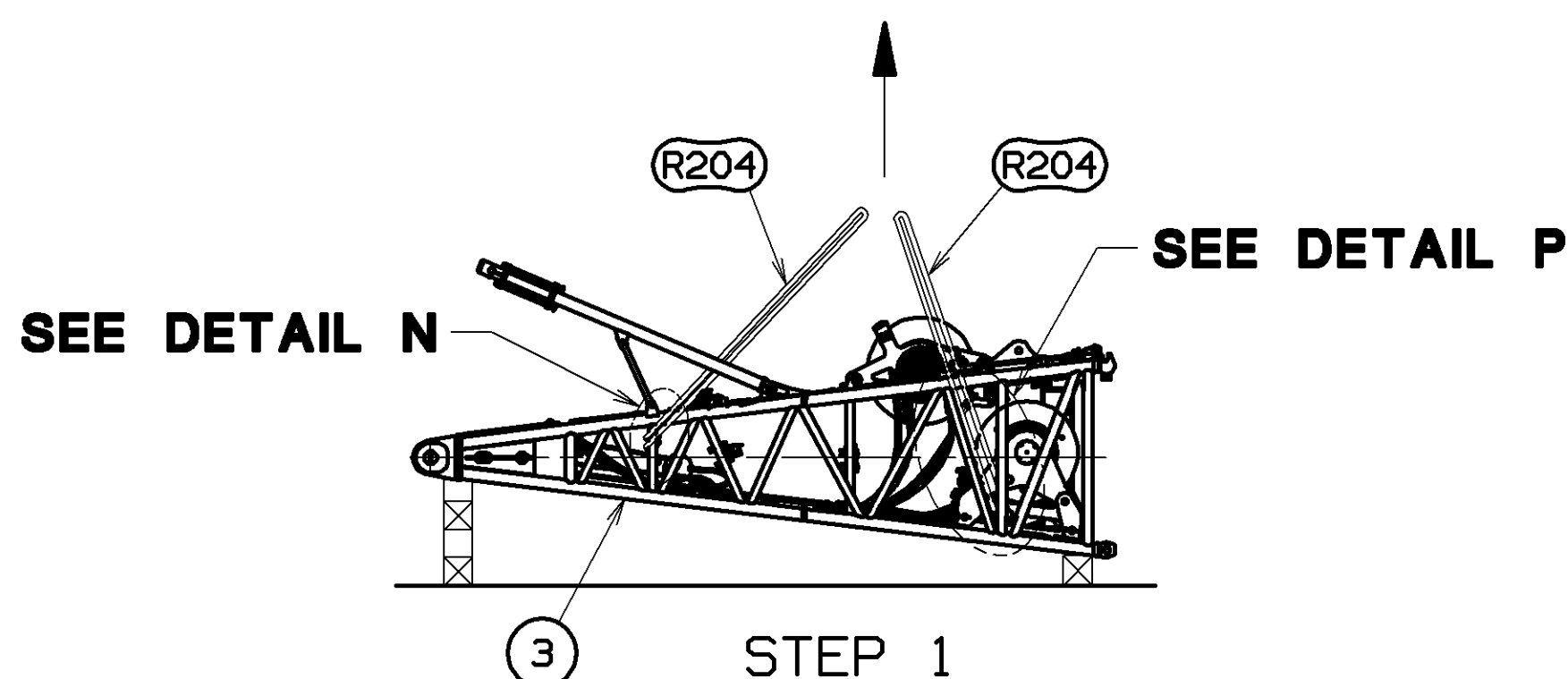


VIEW C-C
SHEAVE CONFIGURATION
SCALE 0.060

NOTE:
LOCATION OF SHEAVE ASSY'S ITEMS R23 & R24 MAY VARY BASED ON REEVING. REFER TO REEVING DIAGRAM (SEE DELTA'S 17 & 18) AND OPERATOR'S MANUAL FOR GUIDANCE

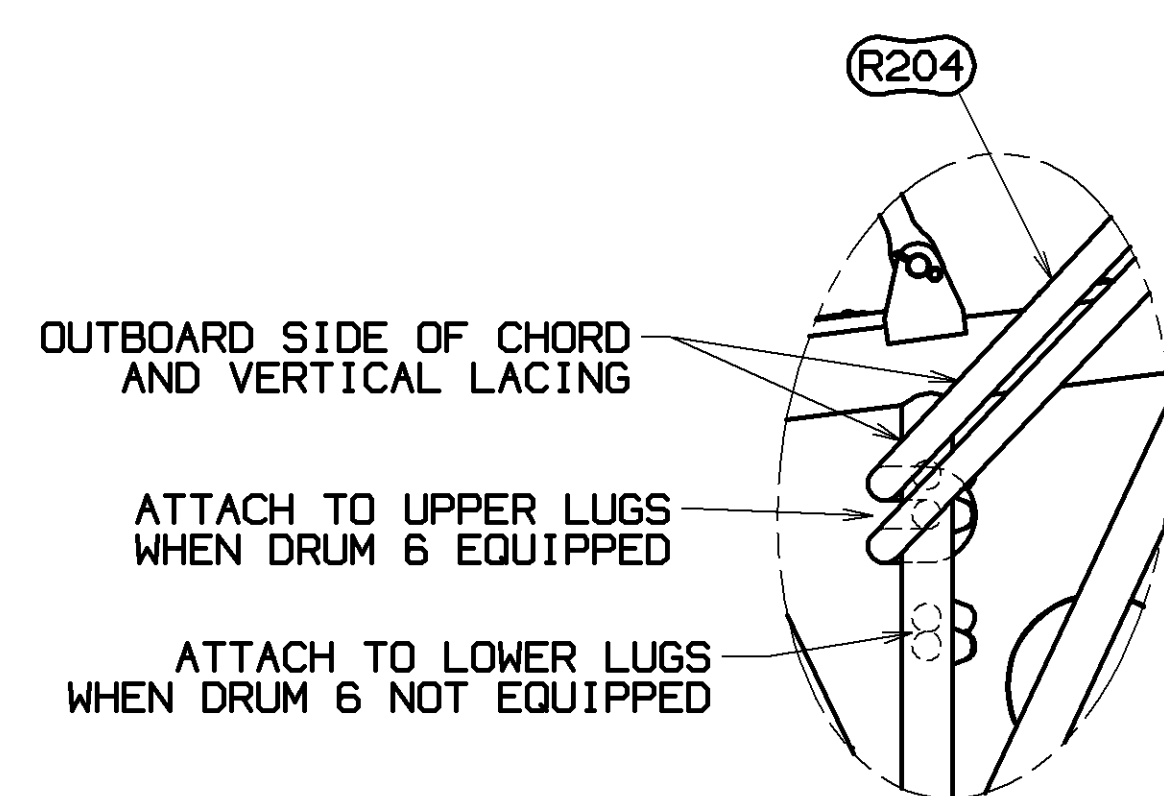


BOOM TOP WIRE ROPE GUIDE ARRANGEMENT
SCALE 0.025

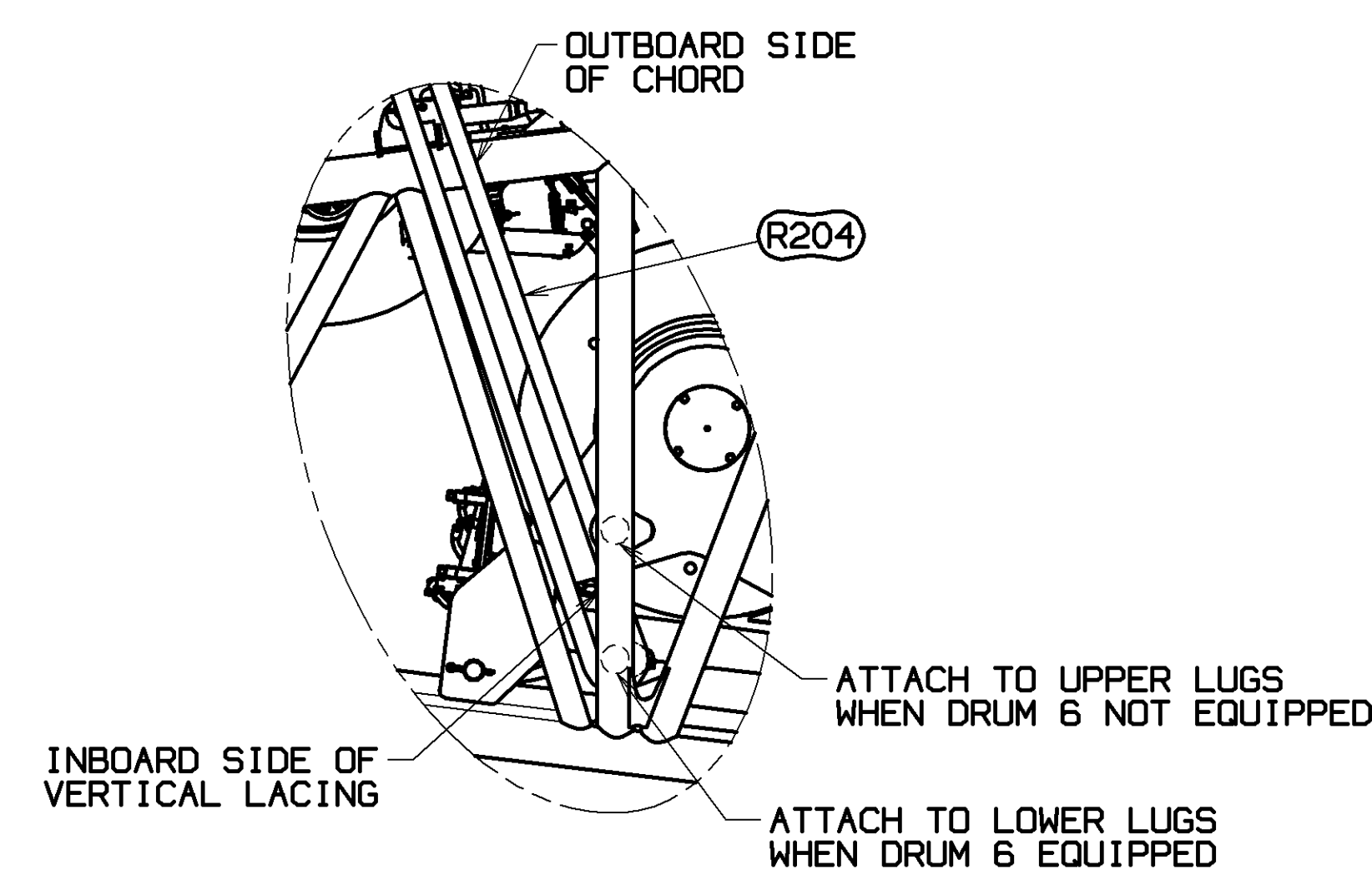


STEP 1
BOOM BUTT PREP
BLOCK AND POSITION BOOM BUTT (ITEM 3).
TO HANG APPROXIMATELY LEVEL PICK AS FOLLOWS:

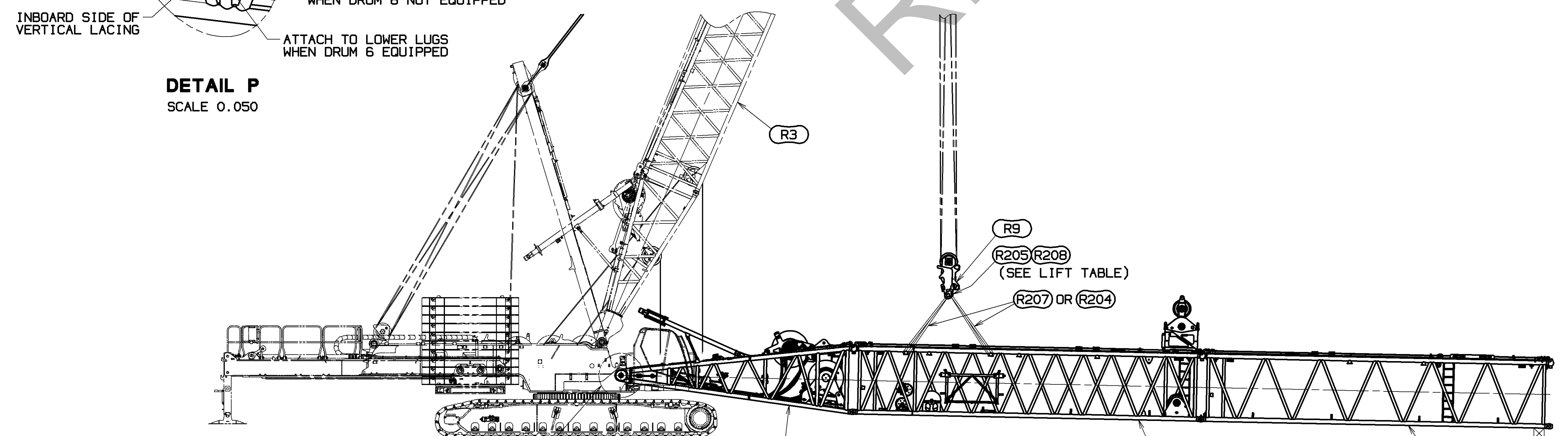
1. ROUTE SLINGS (R204) ON THE INBOARD SIDE OF THE BOOM STOPS.
2. ROUTE SLINGS (R204) NEAREST BOOM HINGE OVER THE OUTBOARD SIDE OF THE BOOM BUTT CHORDS AND THE OUTBOARD SIDE OF THE VERTICAL LACINGS THAT THE SLING LUGS ARE WELDED TO. (SEE DETAIL N)
ROUTE SLINGS (R204) NEAREST CONNECTOR END OVER THE OUTBOARD SIDE OF THE BOOM BUTT CHORDS AND THE INBOARD SIDE OF THE VERTICAL LACINGS THAT THE SLING LUGS ARE WELDED TO. (SEE DETAIL P)
3. WHEN DRUM 6 EQUIPPED USE UPPER BUTT SLING LUGS NEAREST BOOM HINGE AND LOWER BUTT SLING LUGS TOWARD CONNECTOR END. (SEE DETAILS N & P)
WHEN DRUM 6 NOT EQUIPPED USE LOWER BUTT SLING LUGS NEAREST BOOM HINGE AND UPPER BUTT SLING LUGS TOWARD CONNECTOR END. (SEE DETAILS N & P)



DETAIL N
SCALE 0.075



DETAIL P
SCALE 0.050

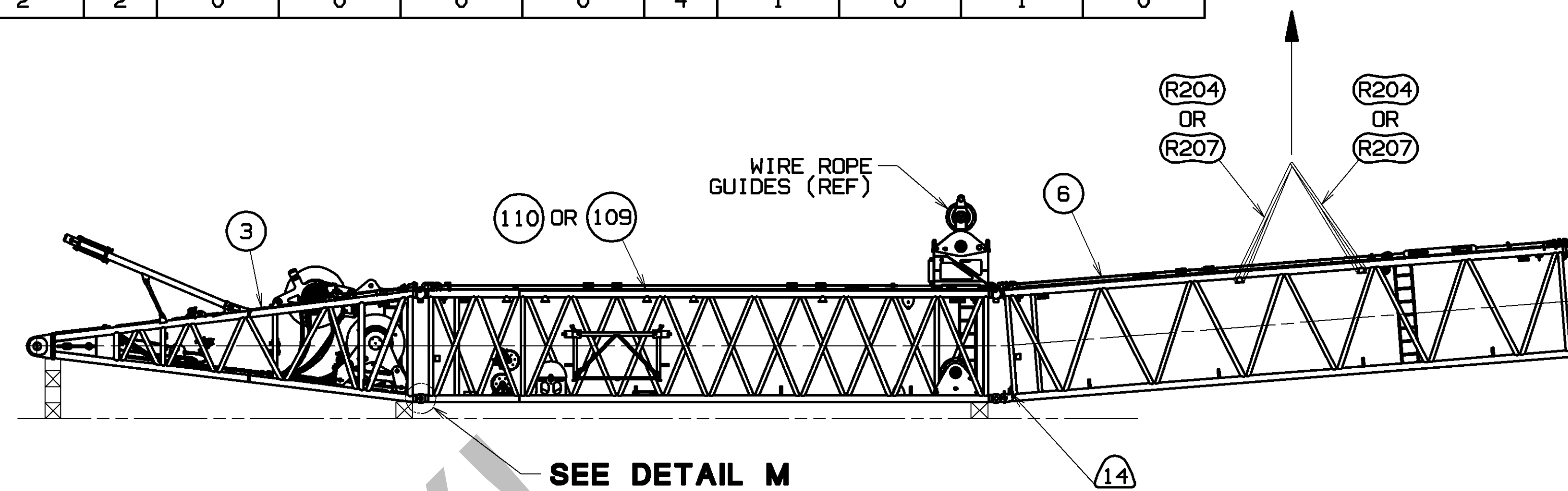


SEE DETAIL Q

STEP 3B
INSTALL PARTIAL BOOM

RAISE PARTIAL BOOM AND SET INNER PLATE OF BUTT HINGE ON ALIGNMENT TAB OF ROTATING BED. (SEE DETAIL Q).
ACTIVATE HINGE PIN CYLINDER TO INSTALL HINGE PIN INTO BUTT (ITEM 3).
LOWER PARTIAL BOOM ONTO BLOCKING.
DETACH LIFTING SLINGS (R207 OR R204) FROM 12M INSERT (ITEM 109 OR 110).

PARTIAL BOOM LIFT TABLE												
INSERT CONFIGURATION	SLINGS (4)	R205 SHACKLE (25 MT)	BACK/HINGE SLING				FRONT/TOP SLING					
			POST	LEFT		RIGHT		POST	LEFT		RIGHT	
				R208 SHACKLE (20.5 T)	WRAP ON CHORD	R208 SHACKLE (20.5 T)	WRAP ON CHORD		R208 SHACKLE (20.5 T)	WRAP ON CHORD		
WITH LUFFING JIB BACKSTAYS AND DRUM 6 ASSEMBLED	R207	2	1	2	0	1	0	3	0	0	0	0
	R204	2	1	2	0	1	0	3	0	0	0	0
WITHOUT LUFFING JIB BACKSTAYS, WITH DRUM 6	R207	2	1	0	0	0	0	3	1	0	0	0
	R204	2	1	0	0	0	0	3	1	0	0	0
WITHOUT LUFFING JIB BACKSTAYS OR DRUM 6	R207	2	2	0	0	0	0	4	2	0	2	0
	R204	2	2	0	0	0	0	4	1	0	1	0

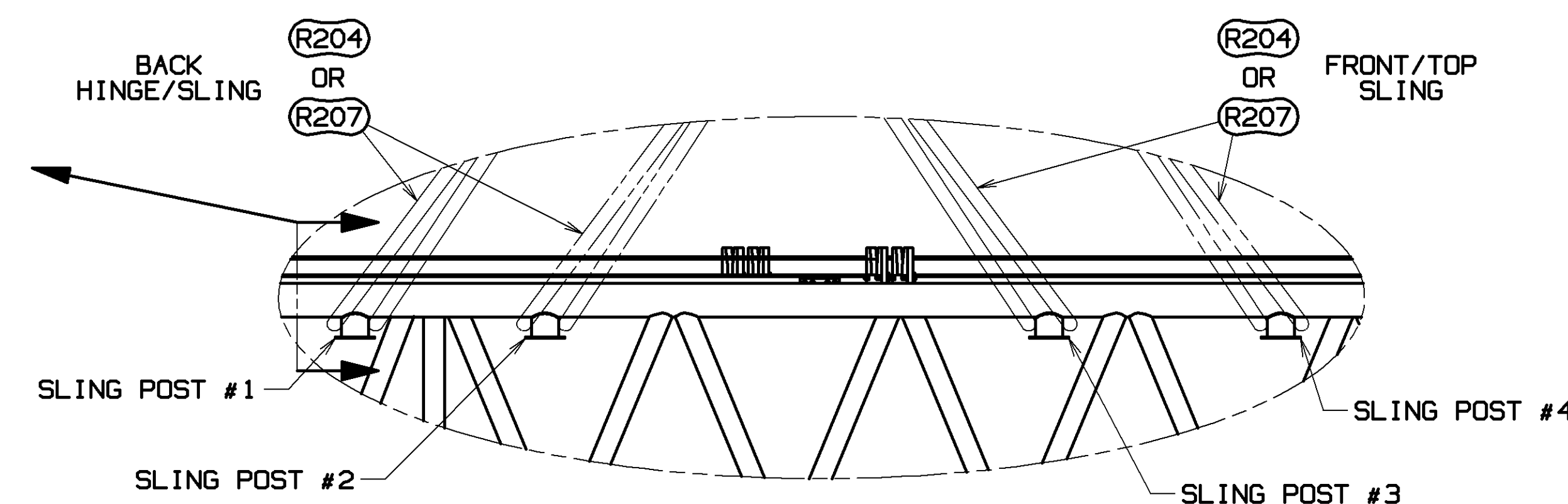
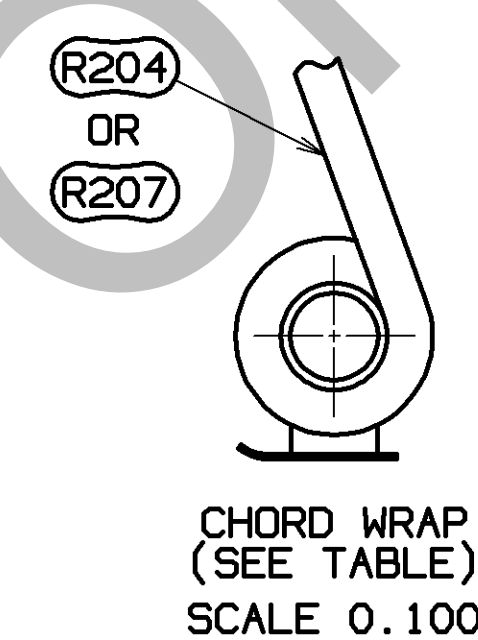


SEE DETAIL M
(SEE SHEET 8)

STEP 2

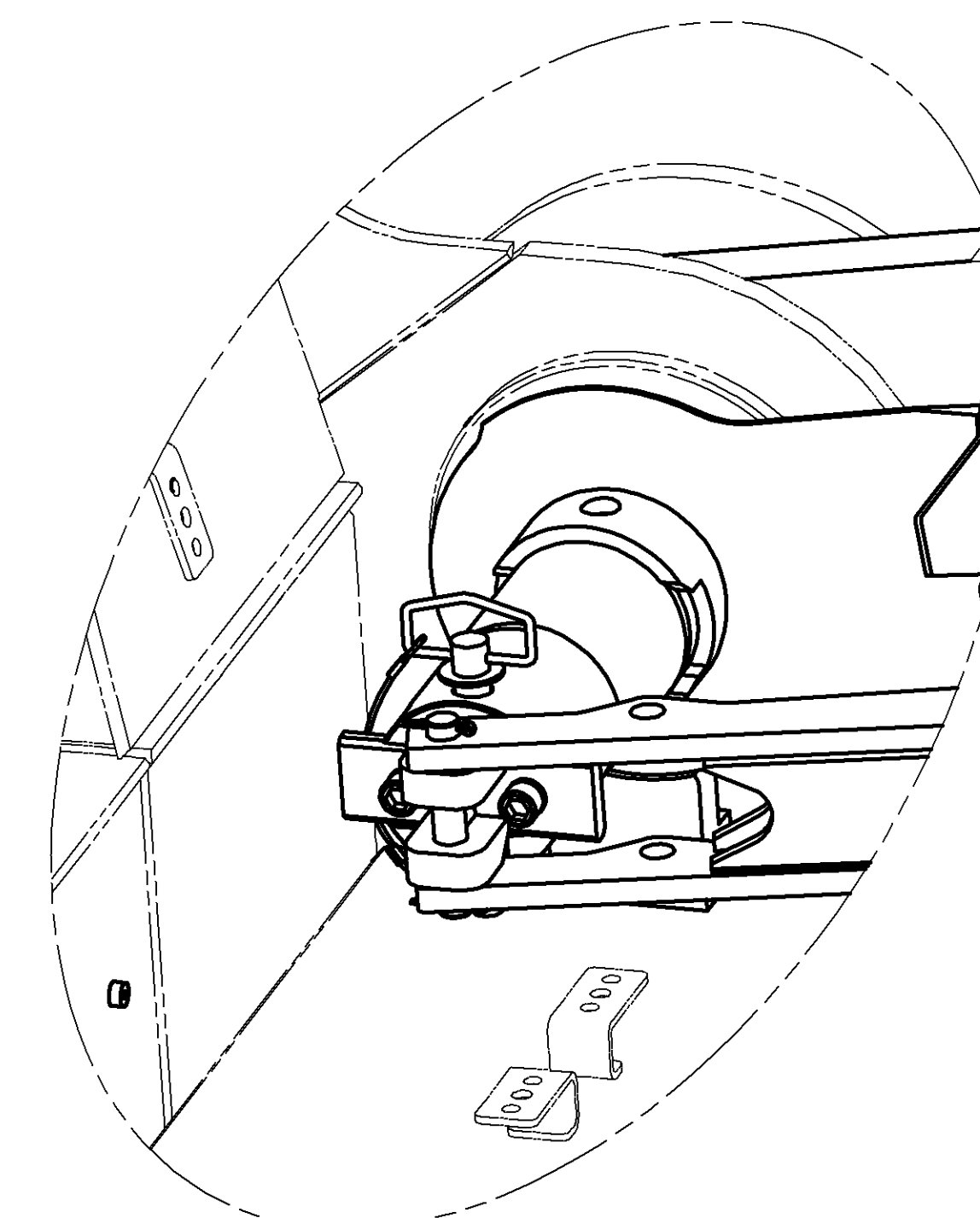
BOOM "BUTT TO EQUALIZER INSERT" ASSEMBLY
RELOCATE WIRE ROPE GUIDES IN 12M INSERT (ITEM 109 OR 110) TO TOP OF INSERT PER USE OF DRUMS 2, 3 AND 6. (SEE SECTION D-D ON SHEET 3)

CONTINUE ASSEMBLING 12M INSERTS (ITEM 109 OR 110 AND 6) TO BUTT (ITEM 3) USING (4) EQUAL LENGTH LIFTING SLINGS (R207 OR R204).
INSTALL LOWER BOOM CONNECTOR PINS. (SEE DETAIL M ON SHEET 8).
RELOCATE EQUALIZER SPACER LINKS TO STOWAGE LOCATION (SEE DETAIL G ON SHEET 4).

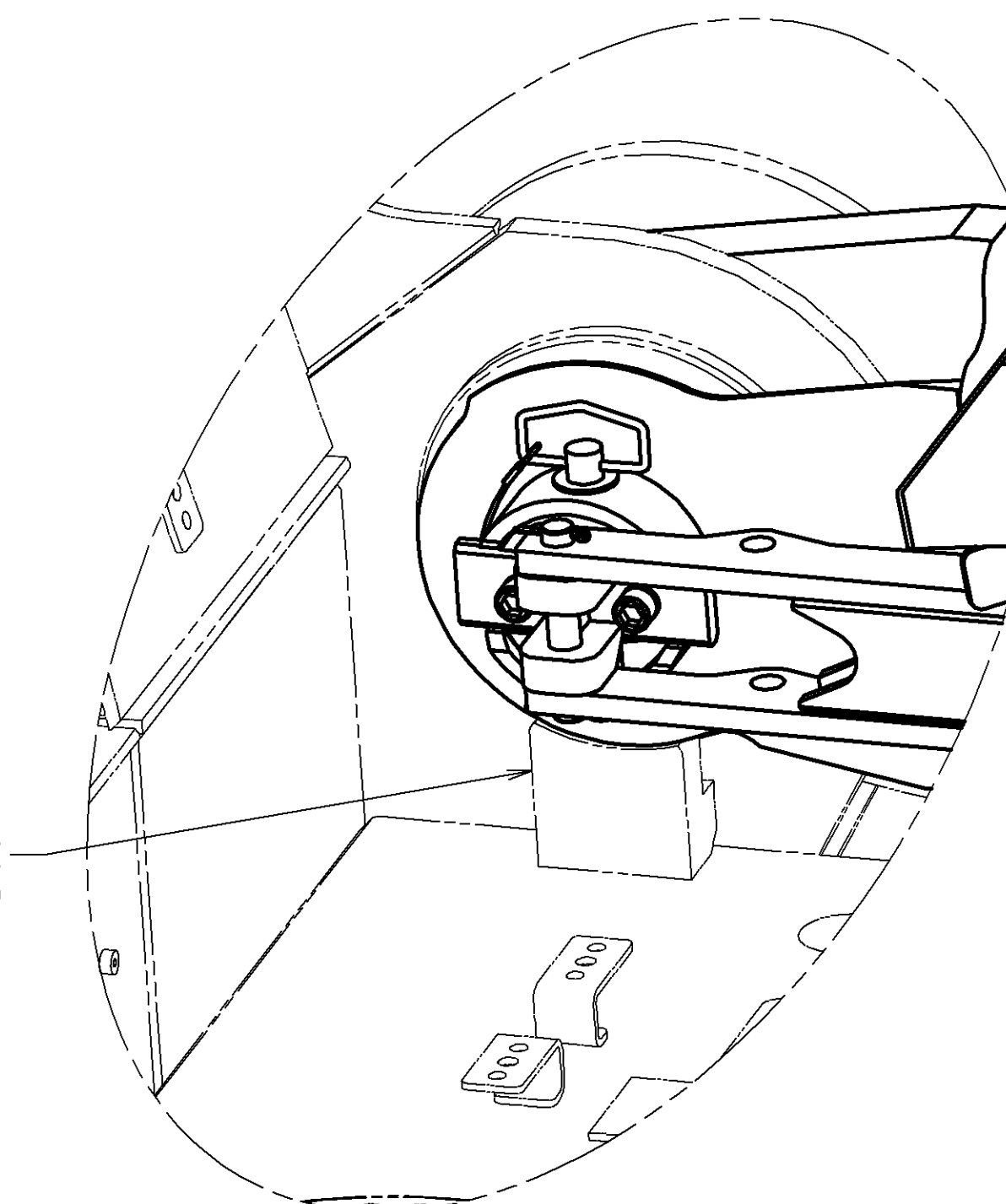


DETAIL AA
SCALE 0.050

SEE PARTIAL BOOM LIFT TABLE FOR VARIOUS INSERT CONFIGURATIONS



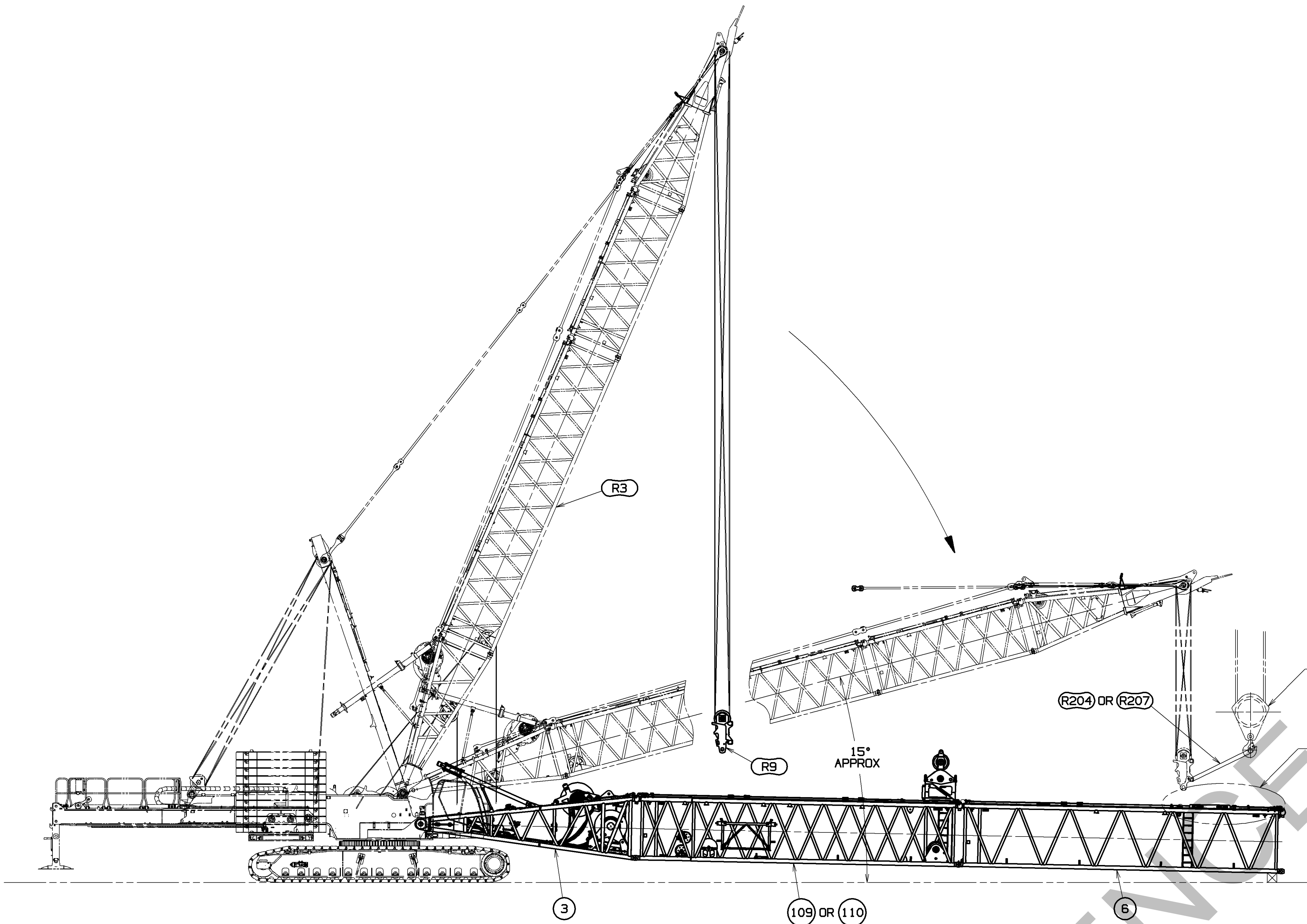
DETAIL Q
BOOM HINGE INSTALLATION
PIN PULLER RETRACTED
(VIEW LOOKING FROM CENTERLINE
BOOM TOWARD FAR SIDE HINGE PIN)
SCALE 0.200



DETAIL Q
BOOM HINGE INSTALLATION
PIN PULLER EXTENDED
(VIEW LOOKING FROM CENTERLINE
BOOM TOWARD FAR SIDE HINGE PIN)
SCALE 0.200

TOLERANCE UNLESS OTHERWISE SPECIFIED				MATERIAL		MATERIAL		MATERIAL		MATERIAL	
DECIMAL PLACES	FRACTION	INCHES	MILLIMETERS	DR. RHY	DR. TRG	DR. RHY	DR. TRG	DR. RHY	DR. TRG	DR. RHY	DR. TRG
(1) PLACE 0.0	1/16	0.0625	1.6	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
(2) PLACE 0.00	1/32	0.03125	0.8	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
(3) PLACE 0.000	1/64	0.015625	0.4	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
ANGLES	11° 30'	11° 30'	11° 30'	11° 30'	11° 30'	11° 30'	11° 30'	11° 30'	11° 30'	11° 30'	11° 30'

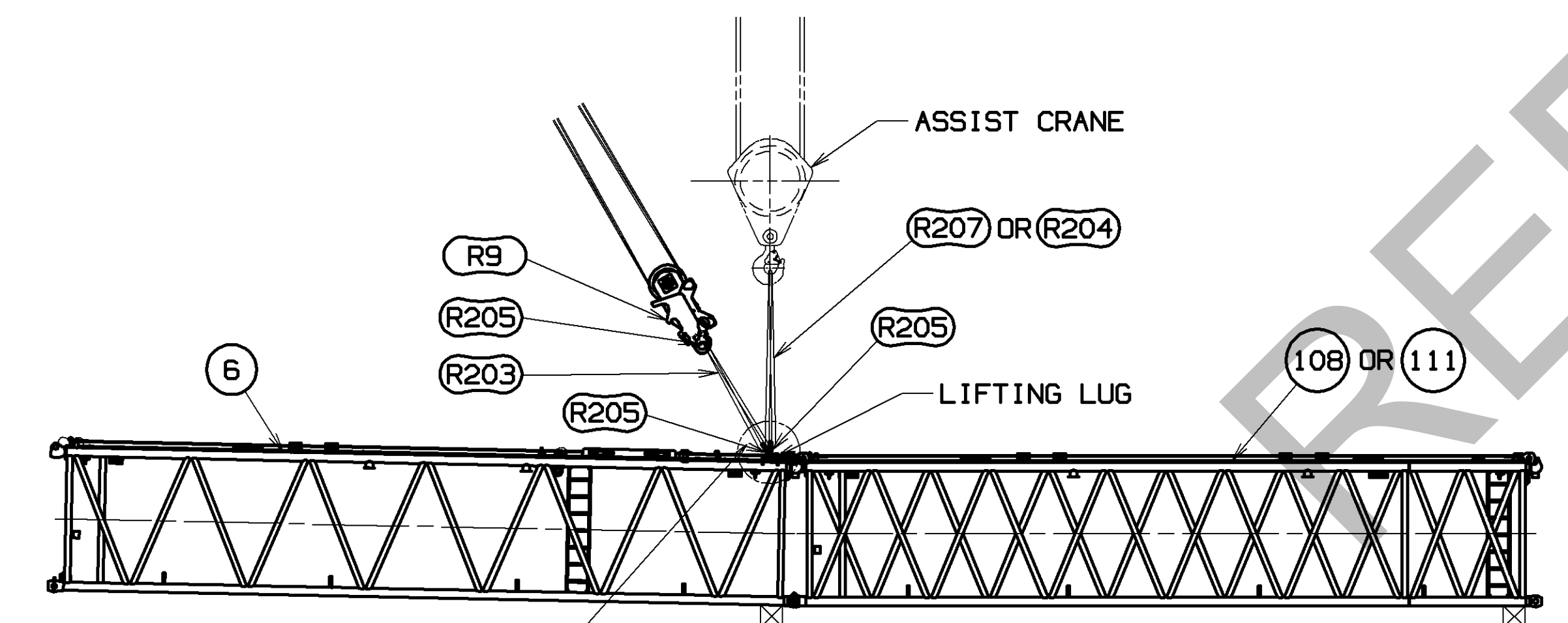
THIS PRINT REMAINS THE PROPERTY OF MANITOWOC CRANES, INC. ALL INFORMATION CONTAINED HEREIN IS CONFIDENTIAL IT IS LOANED, SUBJECT TO RETURN UPON DEMAND, AND ON EXPRESS CONDITION THAT IT IS NOT TO BE COPIED OR USED DIRECTLY OR INDIRECTLY IN ANY MANNER DETRIMENTAL TO OUR INTERESTS.	MANITOWOC CRANES, INC. 865.505-500	BOOM RIGGING 865.505-500	DATE 03-27-19 REV. LVL. A
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STEP 4A

EQUALIZER TO INSERT ALIGNMENT

LOWER FIXED MAST TO APPROXIMATELY 15° WITH EQUALIZER (R9) SLIGHTLY ABOVE EQUALIZER INSERT (ITEM 6).
ATTACH ASSIST CRANE TO EQUALIZER (R9) LOWER SLING POSTS WITH LIFTING SLINGS (R207 OR R204).



SEE DETAIL R

STEP 5

BOOM CLOSING

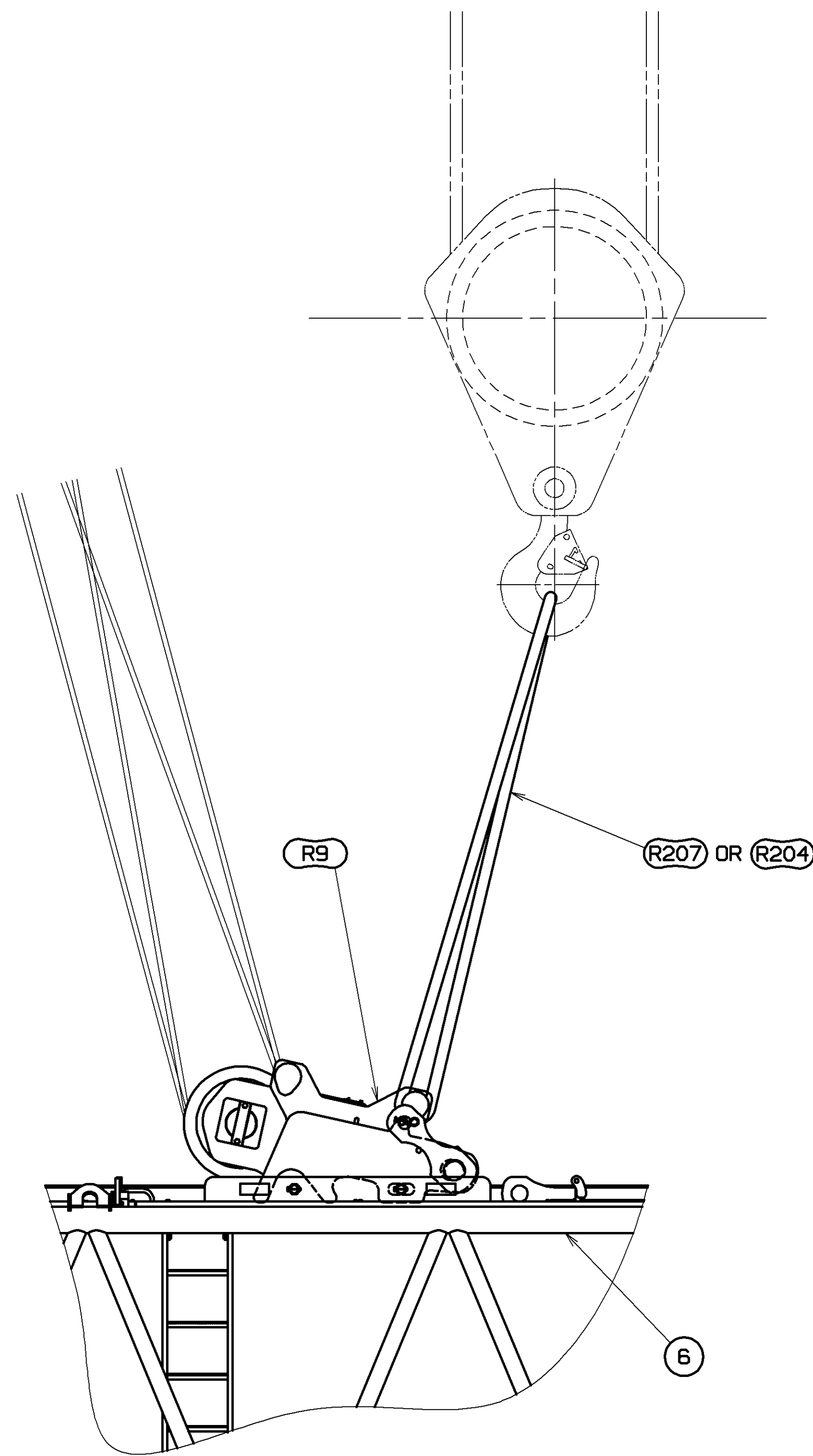
ASSEMBLE DESIRED BOOM LENGTH CONFIGURATION PER SHEETS 3, 4 & 5 OR CANTILEVERED INSERTS
PER TABLE ON SHEET 2 FOR BOOM HANDLING WITH EQUALIZER.

BOOM CLOSING WITH OUTSIDE ASSIST

ATTACH ASSIST CRANE TO LIFTING LUGS ON EQUALIZER INSERT (ITEM 6) USING EQUAL LENGTH LIFTING SLINGS (R207 OR R204) AND SHACKLES (R205). (SEE DETAIL R)
LIFT UP ON EQUALIZER INSERT AND INSTALL LOWER BOOM CONNECTOR PINS (R116 OR R114) AND SAFETY PINS (R115). (SEE DETAIL M).
DETACH SLINGS AND SHACKLES.

BOOM CLOSING WITH FIXED MAST

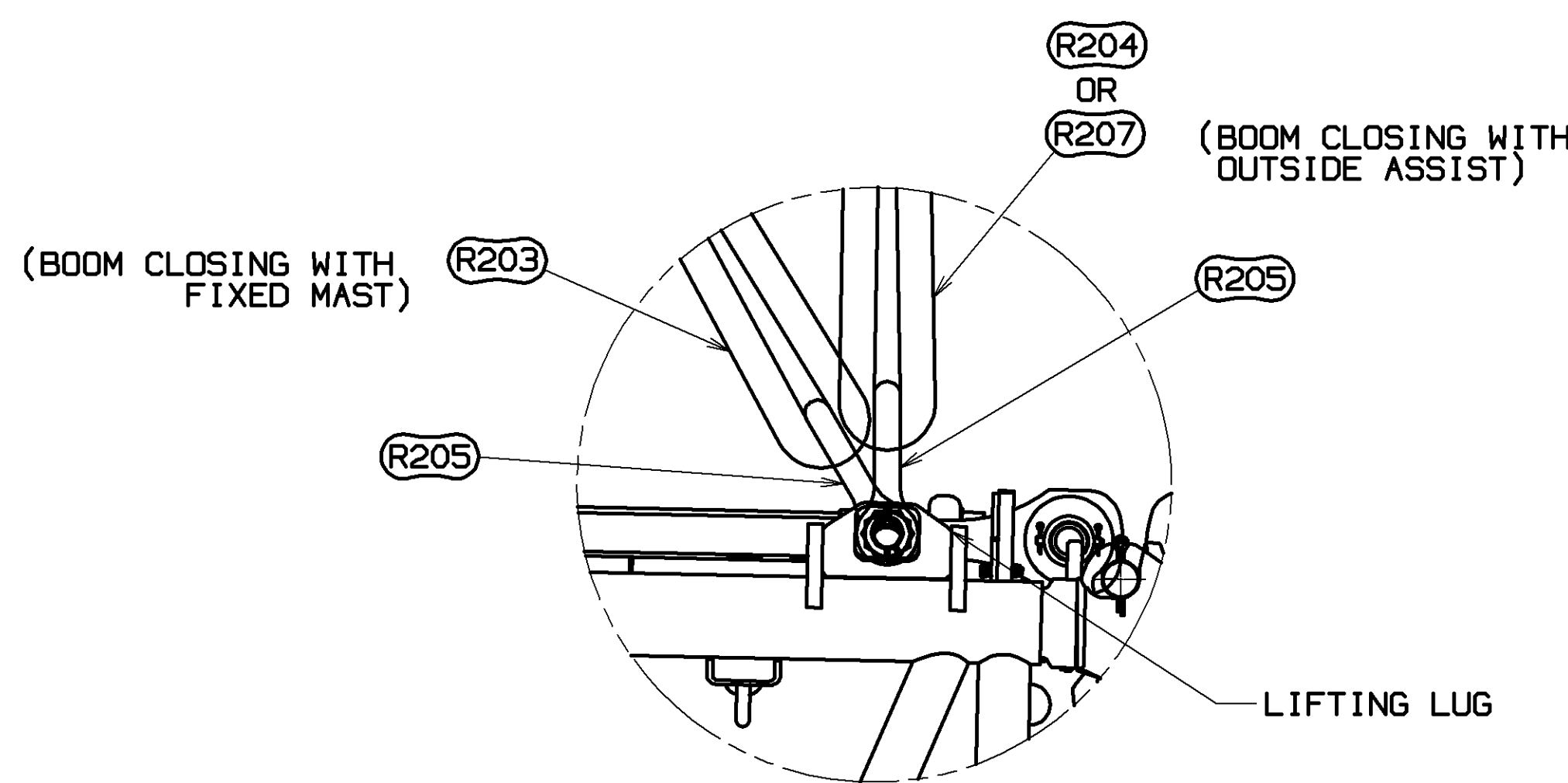
ATTACH HORIZONTALLY POSITIONED EQUALIZER (R9) TO EQUALIZER INSERT (ITEM 6)
WITH SLINGS (R203) USING SHACKLES (R205) AT BOTH ENDS. (SEE DETAIL R ON SHEET 8 AND DETAIL S ON SHEET 9)
POSITION MAST AT 28° ABOVE HORIZONTAL.
REMOVE FRONT EQUALIZER PINS SECURING EQUALIZER TO INSERT RAILS. (SEE DETAIL S ON SHEET 9)
PAY IN BOOM HOIST WIRE ROPE TO RAISE THE EQUALIZER (R9) AND THE EQUALIZER INSERT UNTIL THE BOTTOM CONNECTING HOLES BETWEEN THE INSERTS ARE ALIGNED.
INSTALL LOWER BOOM CONNECTOR PINS (R116 OR R114) AND SAFETY PINS (R115). (SEE DETAIL M)
LOWER EQUALIZER ONTO RAILS OF EQUALIZER INSERT AND REMOVE SLINGS (R203) AND SHACKLES (R205) FROM BOTH ENDS.
SECURE EQUALIZER TO RAILS WITH FRONT EQUALIZER PINS. (SEE DETAIL S ON SHEET 9).



STEP 4B

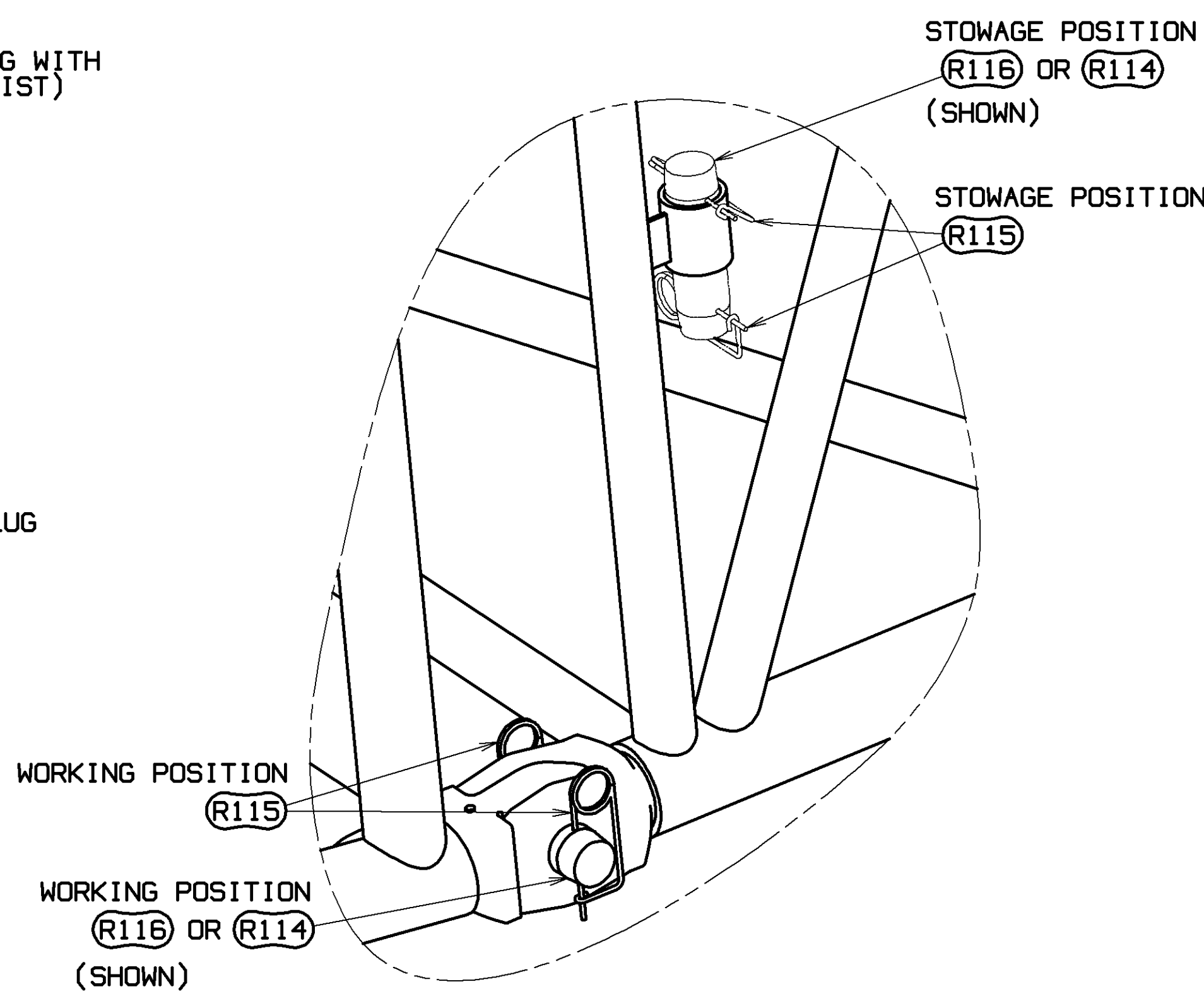
RELOCATE REAR ALIGNMENT PINS FROM STORAGE TUBES TO THE REAR
OF THE EQUALIZER RAILS. (SEE DETAIL S ON SHEET 9).
USE ASSIST CRANE TO POSITION EQUALIZER (R9) HORIZONTALLY.
LOWER EQUALIZER ONTO RAILS OF EQUALIZER INSERT (ITEM 6)
AND SECURE WITH FRONT EQUALIZER PINS. (SEE DETAIL S ON SHEET 9).
REMOVE SLINGS (R207 OR R204) FROM EQUALIZER LOWER SLING POSTS.

SCALE 0.050



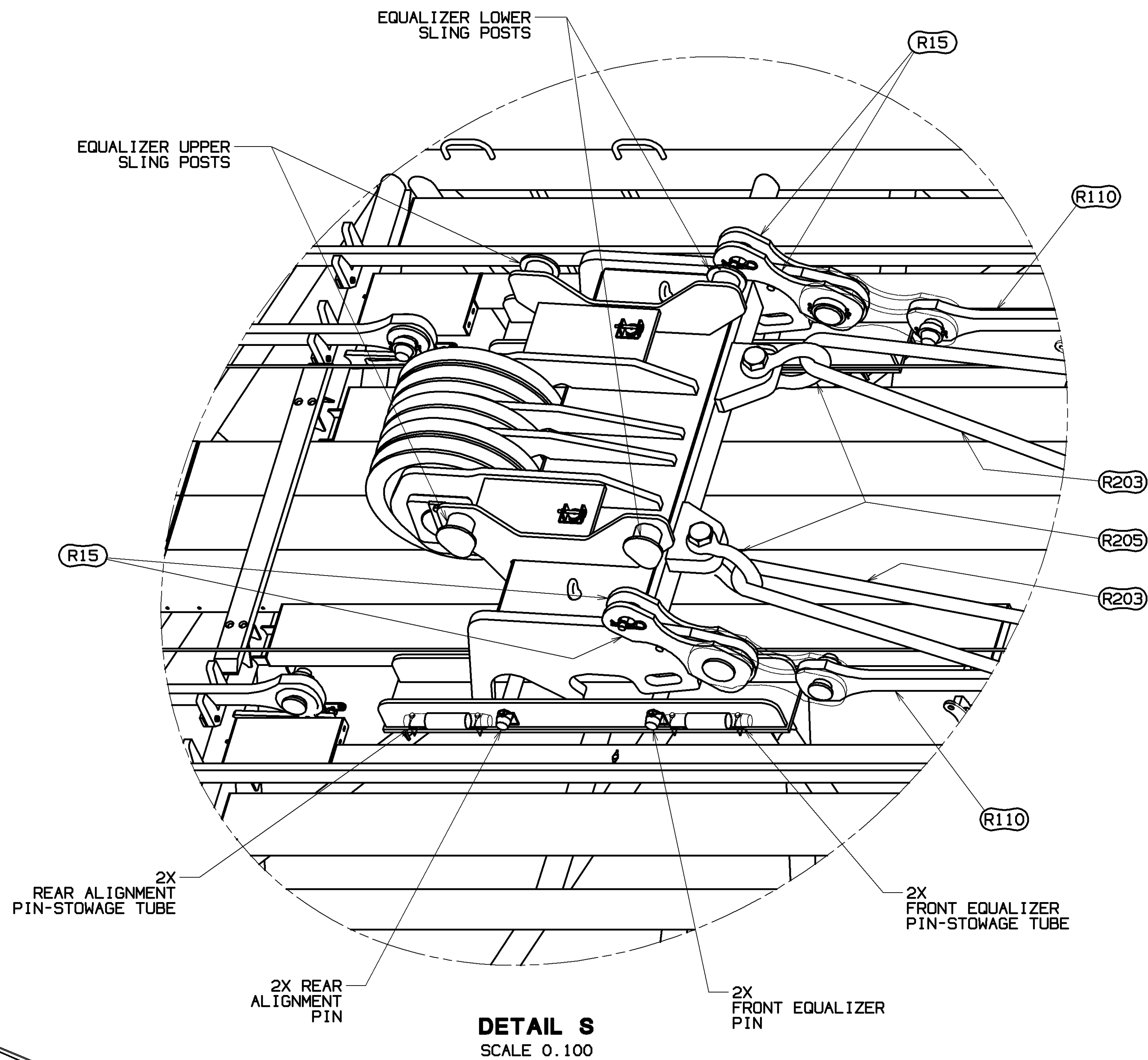
DETAIL R

SCALE 0.100



DETAIL M

SCALE 0.150
(FROM SHEET 7)

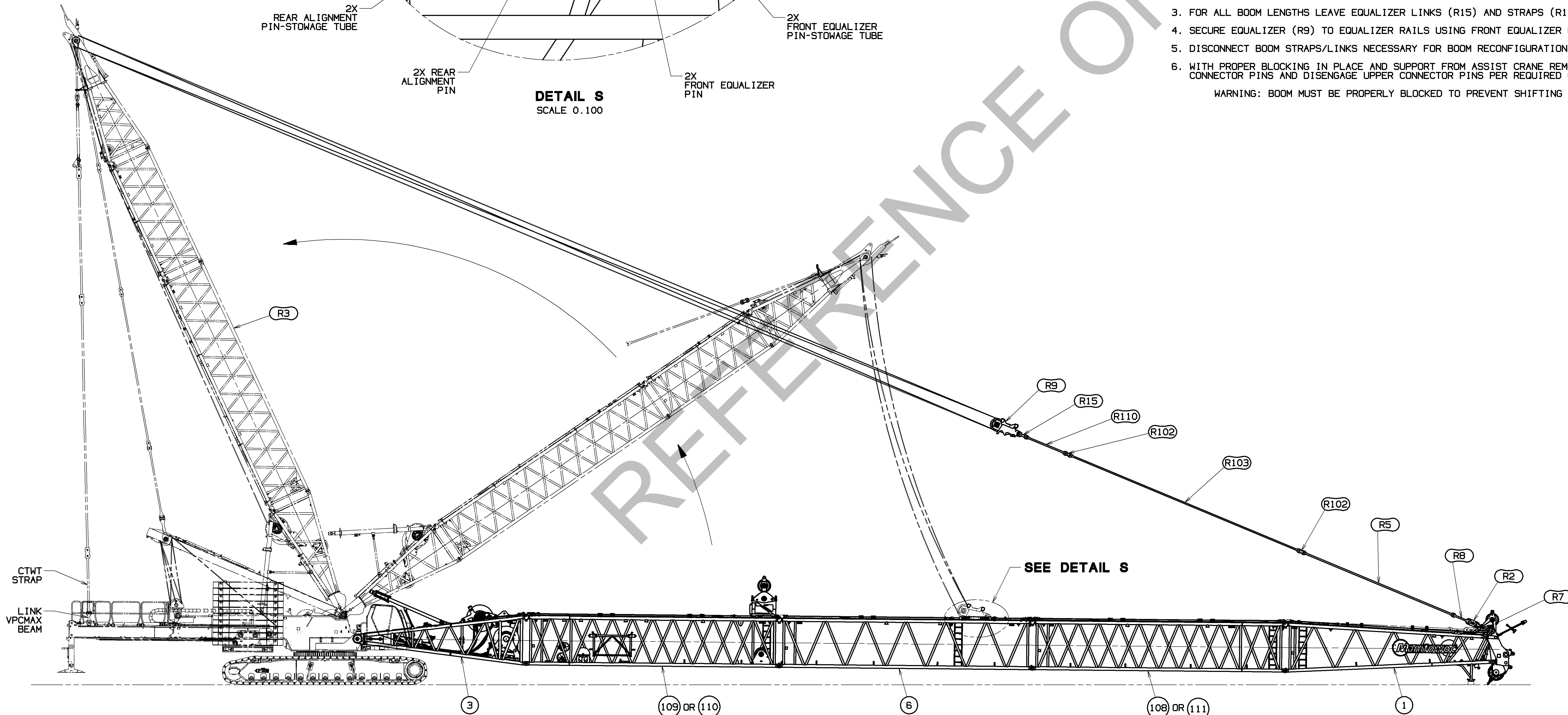


PROCEDURE TO DISASSEMBLE BOOM

1. BOOM DOWN AND SUPPORT BOOM ON BLOCKING.
2. BOOM FIXED MAST (R3) 1" TOWARD MAST STOPS AND DISCONNECT MAST COUNTERWEIGHT STRAPS FROM LINKS ON VPC-MAX BEAM.
3. ROTATE FIXED MAST PAST VERTICAL PER FIXED MAST ASSEMBLY INSTRUCTIONS 84045340.
4. PAY OUT BOOM HOIST TO LOWER EQUALIZER (R9) ONTO INSERT RAILS AND SECURE WITH EQUALIZER PIN. (SEE DETAIL S).
5. DISCONNECT LINKS (R15) FROM EQUALIZER STRAPS (R110) AND PIN LINKS (R15) INTO STORAGE POSITION. (SEE DETAIL S).
6. DISCONNECT BOOM STRAPS/LINKS AT EACH JOINT.
7. WITH PROPER BLOCKING IN PLACE AND SUPPORT FROM ASSIST CRANE REMOVE INSERT LOWER CONNECTOR PINS AND DISENGAGE UPPER CONNECTOR PINS FROM INSERTS TOWARD BOOM TOP FROM EQUALIZER INSERT.
WARNING: BOOM MUST BE PROPERLY BLOCKED TO PREVENT SHIFTING DURING PIN REMOVAL
8. REMOVE VPC-MAX COUNTERWEIGHT
WARNING: DO NOT RAISE THE MAST BEYOND 69° IF COUNTERWEIGHT IS INSTALLED WITHOUT ATTACHING BOOM TO MACHINE AND CONNECTING EQUALIZER TO BOOM STRAPS. CRANE COULD TIP
9. REMOVE PINS SECURING EQUALIZER TO INSERT IF INSTALLED. (SEE DETAIL S)
10. FOR REMOVAL OF BOOM BUTT/EQUALIZER INSERT ASSEMBLY REVERSE INSTALLATION STEPS 1 THRU 3 ON SHEET 7.

PROCEDURE TO DISASSEMBLE BOOM FOR BOOM MAKE UP RECONFIGURATIONS

1. BOOM DOWN AND SUPPORT BOOM ON BLOCKING.
2. PAY OUT BOOM HOIST TO LOWER EQUALIZER (R9) ONTO INSERT RAILS AND SECURE WITH EQUALIZER PIN. (SEE DETAIL S).
3. FOR ALL BOOM LENGTHS LEAVE EQUALIZER LINKS (R15) AND STRAPS (R110) PINNED TOGETHER.
4. SECURE EQUALIZER (R9) TO EQUALIZER RAILS USING FRONT EQUALIZER PIN (SEE DETAIL S).
5. DISCONNECT BOOM STRAPS/LINKS NECESSARY FOR BOOM RECONFIGURATION.
6. WITH PROPER BLOCKING IN PLACE AND SUPPORT FROM ASSIST CRANE REMOVE INSERT LOWER CONNECTOR PINS AND DISENGAGE UPPER CONNECTOR PINS PER REQUIRED CONFIGURATION.
WARNING: BOOM MUST BE PROPERLY BLOCKED TO PREVENT SHIFTING DURING PIN REMOVAL



STEP 6

EQUALIZER TO STRAPS ASSEMBLY

CONNECT BOOM STRAPS/LINKS FROM BOOM TOP TO EQUALIZER INSERT (ITEM 6) IF NOT PREVIOUSLY DONE. CONNECT EQUALIZER LINKS (R15) TO BOOM STRAPS (R110). (SEE DETAIL S). REMOVE PINS SECURING EQUALIZER (R9) TO INSERT IF INSTALLED. (SEE DETAIL S). (PINS SECURING EQUALIZER TO INSERT ARE ONLY REQUIRED WHEN CHANGING BOOM LENGTHS AND THE EQUALIZER IS NOT SUPPORTED BY AN ASSIST CRANE OR CONNECTED TO THE BOOM STRAPS).

RAISE FIXED MAST (R3) AND CONNECT MAST COUNTERWEIGHT STRAPS TO LINKS ON VPC-MAX BEAM PER FIXED MAST ASSEMBLY INSTRUCTIONS 84045340.

BOOM UP TO DESIRED ANGLE.

DO NOT SCALE THIS DRAWING

TOLERANCE UNLESS OTHERWISE SPECIFIED		SCALE	MANUFACTURED BY	BOOM RIGGING
DECIMAL PLACES	FABRICATION	1:10	MANITOWOC CRANES, INC.	865:505-500
(1) PLACE 0.01	± 0.12	± 0.18	DR. RHV	
(2) PLACE 0.00	± 0.06	± 0.12	CK. TRG	
(3) PLACE 0.000	± 0.006	± 0.015	APP. JRR	
ANGLES	± 1°	± 30°		

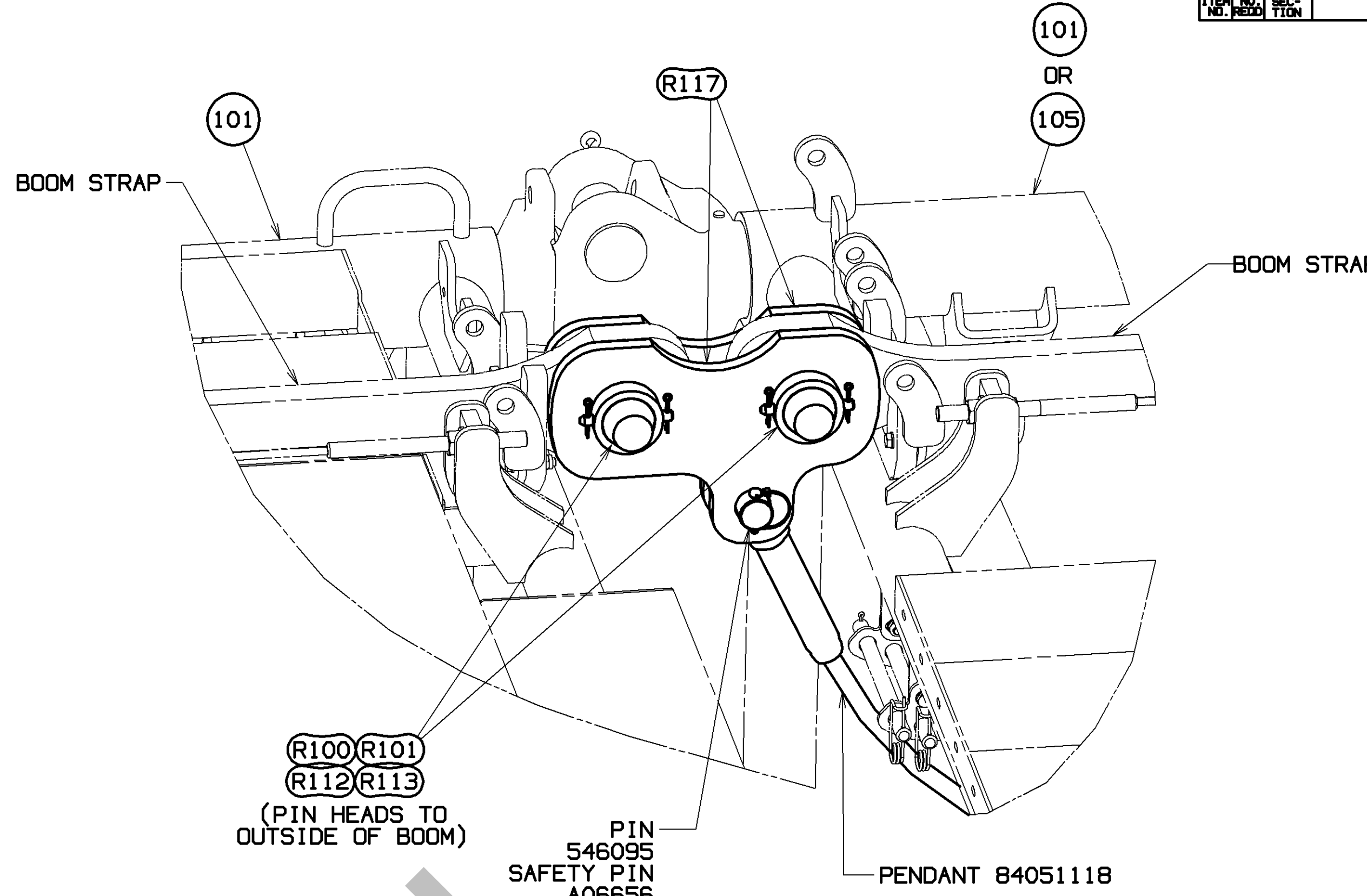
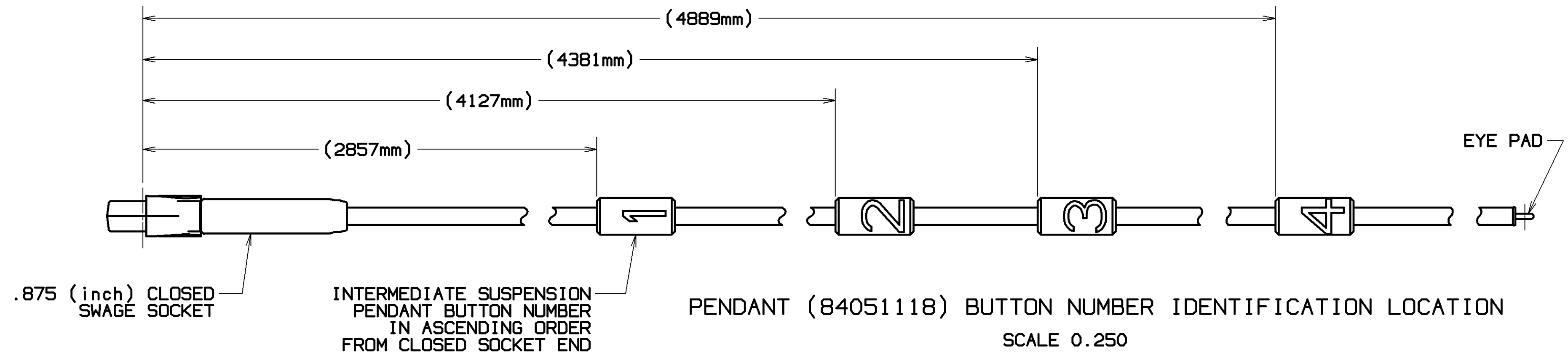
PRIVATE LABELING
REQUIREMENT TO
CONFORM TO
ENGINEERING
SPECIFICATION
8629103794 FOR
COMPONENTS LISTED
IN 862900-06-006

DATE
03-27-19

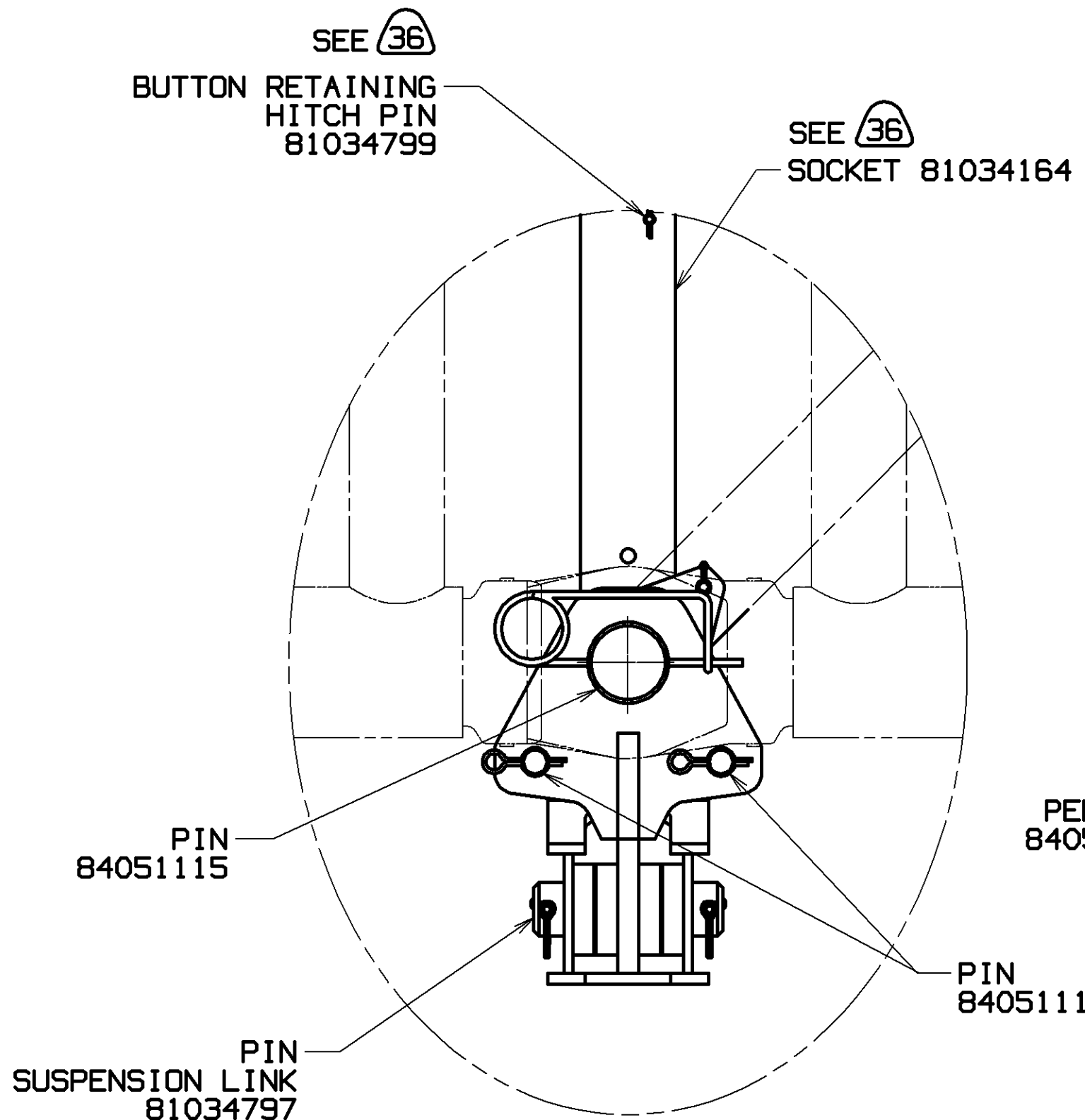
REV. LVL.
A

84050216

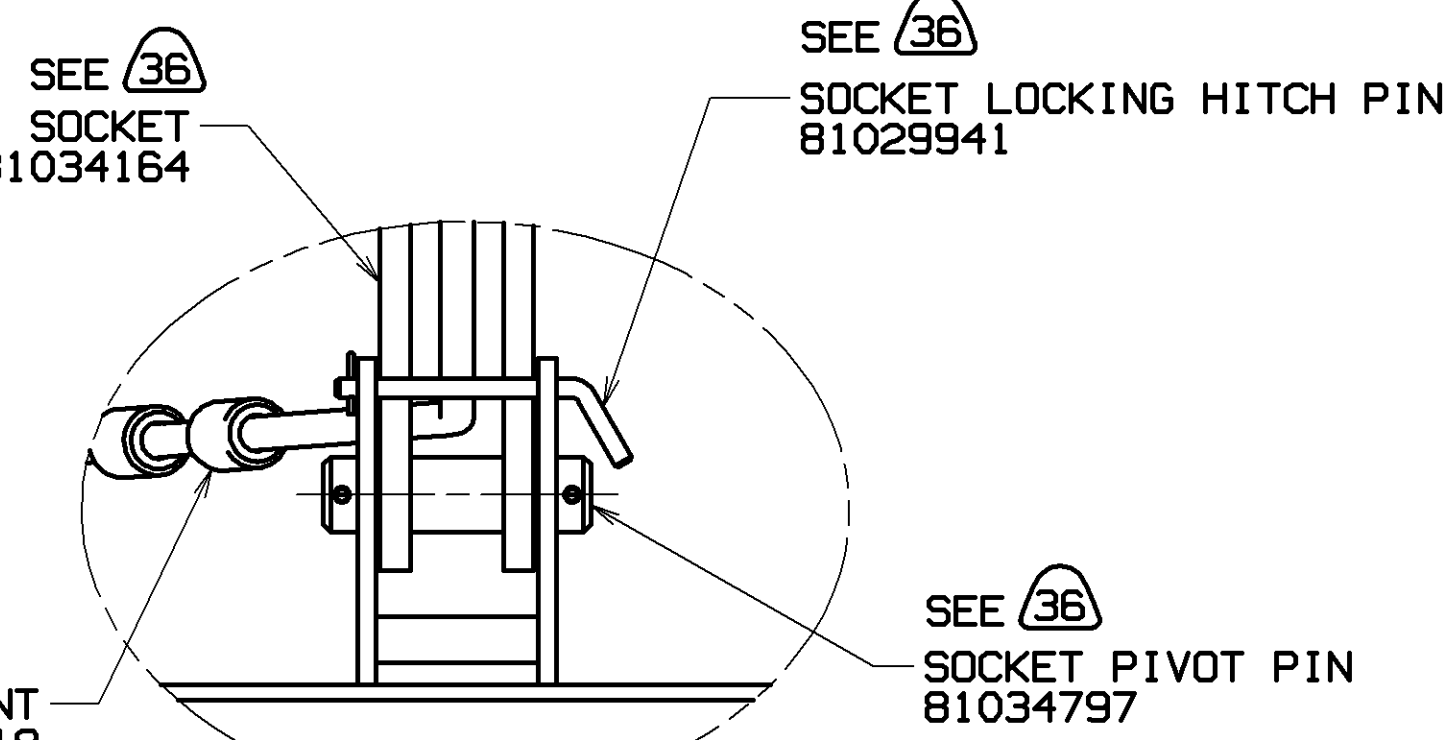
SHT 9 OF 10



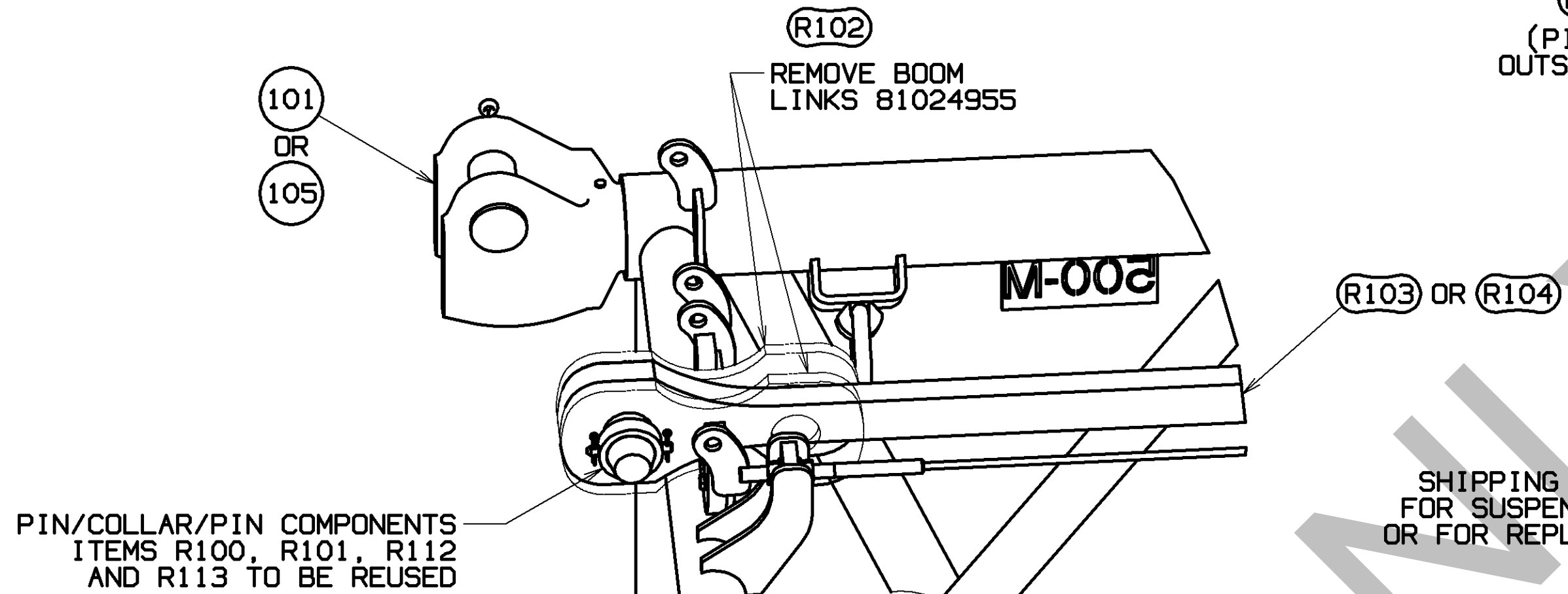
VIEW X-X -WORKING
SCALE 0.200



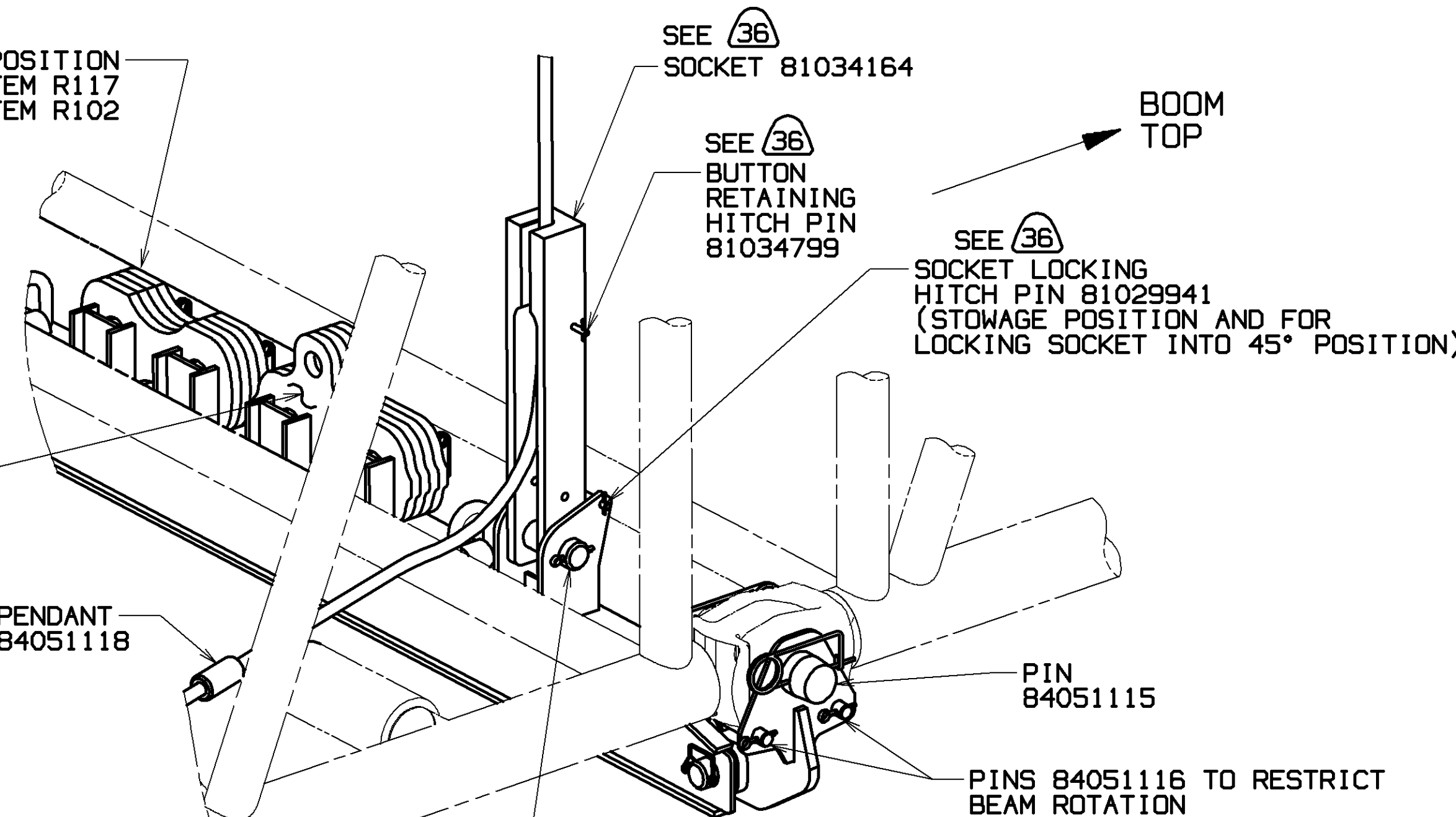
DETAIL V
SCALE 0.200



DETAIL W
SCALE 0.200

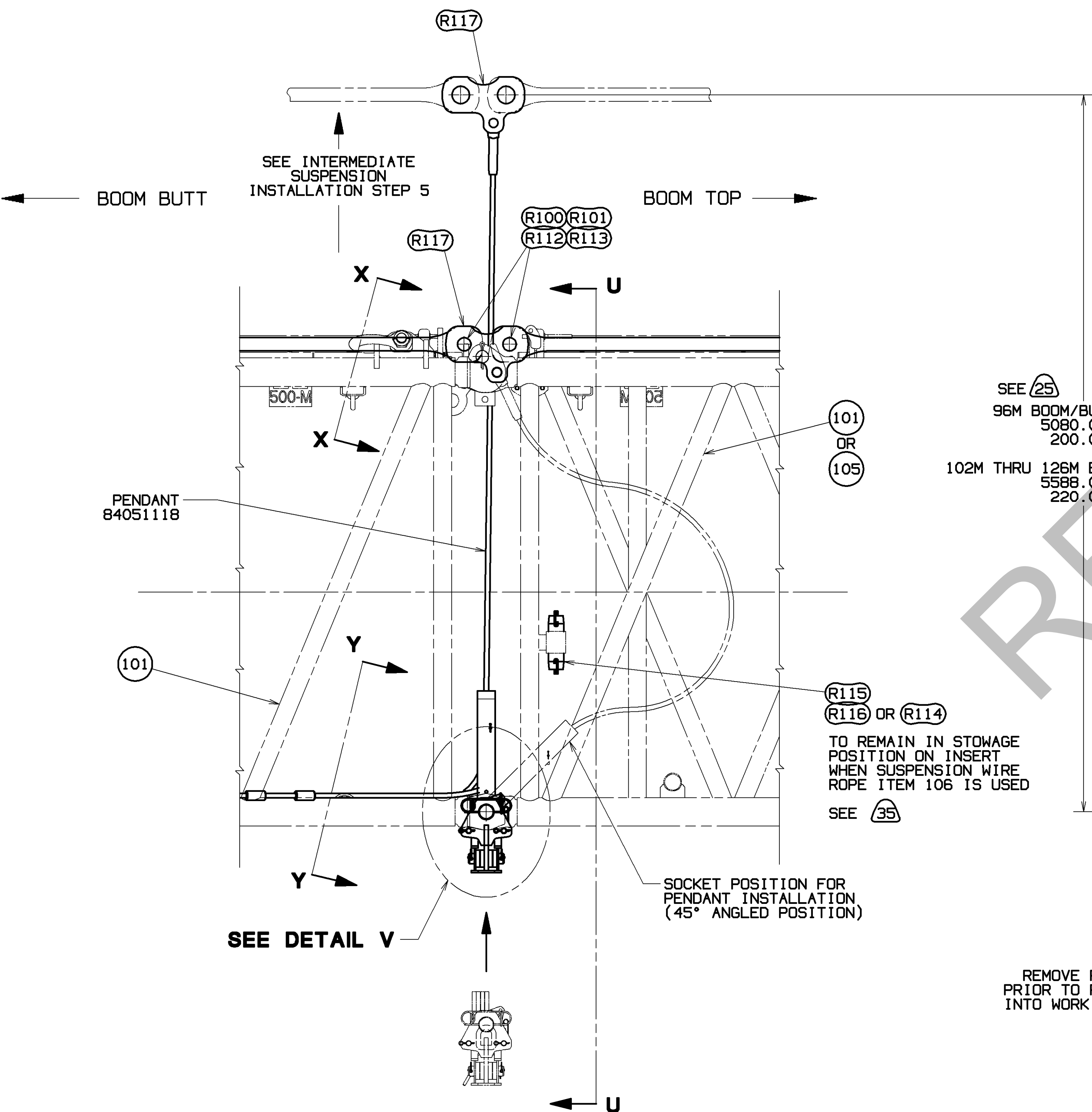


VIEW X-X - PREP
SCALE 0.150

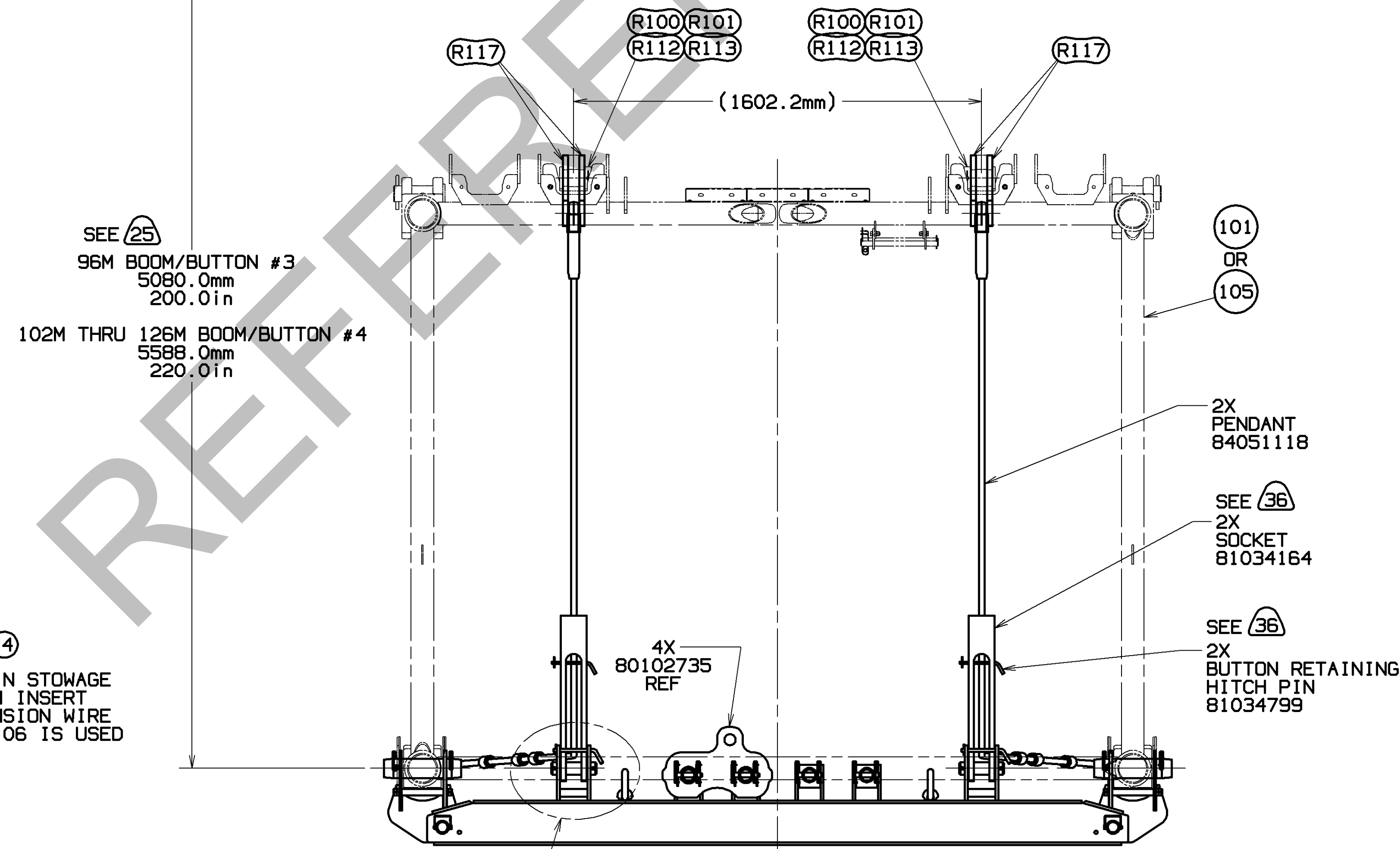


VIEW Y-Y - WORKING
SCALE 0.125

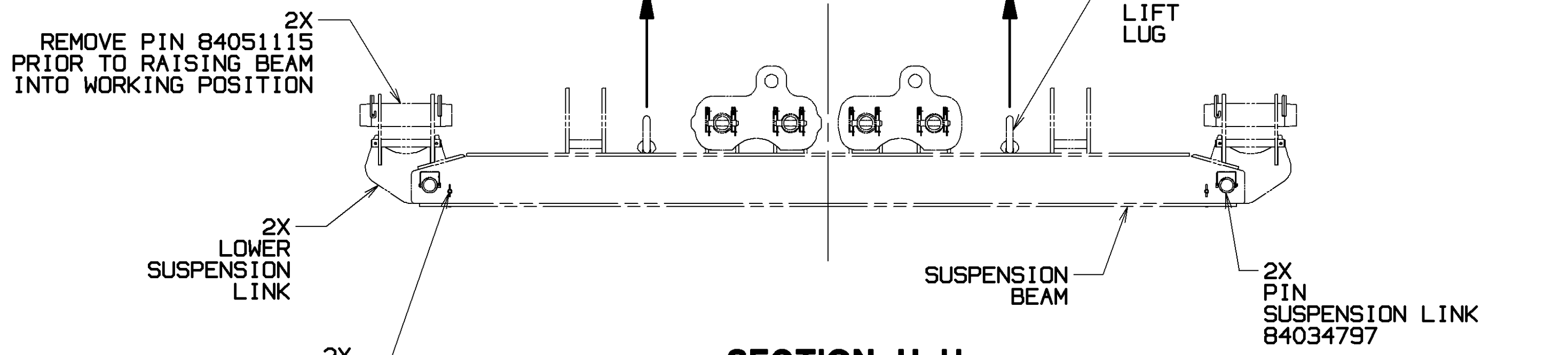
STOWAGE POSITION OF SUSPENSION LINKS 80102735. THE IRREGULAR END PROFILE DISTINGUISHES THEM FROM THE SMOOTH END PROFILE ON LINKS ITEM R117. (80102735 WILL BE USED IN LUFFING JIB CONFIGURATION).



DETAIL T
SUSPENSION WIRE ROPE
ITEM 106, 84051095
(FROM SHEET 5)
SCALE 0.075



SEE DETAIL W



SECTION U-U
SCALE 0.075

INTERMEDIATE SUSPENSION (ITEM 106) INSTALLATION

SEE BOOM MAKEUP VIEWS ON SHEETS 4 & 5 AND BOOM LENGTH TABLE ON SHEET 2 FOR REQUIRED SUSPENSION & WIRE ROPE BUTTON IDENTIFICATION LOCATION. REFERENCE SUSPENSION WIRE ROPE ASSY 84051095 FOR ADDITIONAL INFORMATION. (REFER TO VIEW OF PENDANT 84051118 ON THIS SHEET FOR BUTTON NUMBER I.D. LOCATION).

1. FROM MATING INSERT TOWARD BOOM TOP (ITEM 101 OR 105), REMOVE (4) BOOM LINKS (R102) AND STORE IN PARTS BOX 81028769 OR ON SUSPENSION BEAM AFTER LINKS ITEM R117 HAVE BEEN REMOVED. (SEE Y-Y - WORKING). PIN/COLLAR/PIN COMPONENTS (ITEMS R100, R101, R112 & R113) WILL BE REUSED WITH SUSPENSION LINK PER STEP 4 BELOW. (SEE VIEW X-X - PREP).
2. POSITION SUSPENSION BEAM AND LOWER SUSPENSION LINK UNDER APPROPRIATE INSERT AT MALE CONNECTOR END. ASSEMBLE UPPER CONNECTOR OF MATING INSERT AND PIVOT INSERT TO ALIGN LOWER CONNECTOR HOLES. WITH SOCKETS 81034164 AND LOWER CONNECTOR PINS 8405115 REMOVED FROM SUSPENSION BEAM, USE AN ASSIST TO RAISE SUSPENSION BEAM ASSY TO ALIGN LOWER CONNECTOR AND LOWER SUSPENSION LINK HOLES. REINSTALL PIN 84051115. (SEE DETAIL T AND SECTION U-U).
3. REINSTALL SOCKET INTO SUSPENSION BEAM AND PIVOT SOCKET INTO 45° POSITION. REINSTALL SOCKET LOCKING PIN THRU BRACKET AND SOCKET (ANGLED POSITION). (SEE DETAIL T).
4. ATTACH INSERT BOOM STRAPS WITH DOUBLE LINKS (R117) USING EXISTING PIN/COLLAR/PIN COMPONENTS (ITEMS R100, R101, R112 & R113) REMOVED IN VIEW X-X - PREP. ATTACH CLOSED SOCKET END OF PENDANT 84051118 TO LINKS R117. (SEE VIEW X-X - WORKING).
5. WITH SOCKET LOCKED IN 45° POSITION, SLOWLY RAISE BOOM. AS THE STRAPS RISE, GUIDE THE INTERMEDIATE SUSPENSION PENDANTS THROUGH THE OPENING BETWEEN THE BOOM INSERTS. STOP THE BOOM RAISING PROCEDURE WHEN THE REQUIRED PENDANT NEARS THE SOCKET. REMOVE BUTTON RETAINING HITCH PIN FROM SOCKET. POSITION THE IDENTIFIED PENDANT BUTTON OF THE MULTI-BUTTON PENDANT 84051118 INTO SOCKET AND REINSTALL BUTTON RETAINING HITCH PIN INTO SOCKET, LOCKING PENDANT IN POSITION. (SEE DETAIL T).
6. PRIOR TO CONTINUATION OF BOOM RAISING, REMOVE SOCKET LOCKING HITCH PIN FROM 45° POSITIONED SOCKET AND BRACKET. STOW IN BRACKET HOLE (STOWAGE POSITION) ALLOWING SOCKET TO PIVOT AS BOOM STRAPS RAISE. (SEE VIEW Y-Y - WORKING).
7. BOOM UP SLOWLY AS PENDANT BECOMES TIGHT AND SOCKET PIVOTS INTO WORKING POSITION.

FOR REMOVAL OF DROP-DOWN INTERMEDIATE SUSPENSION (ITEM 106) REVERSE INSTALLATION STEPS 1 THRU 7, ASSURING SOCKET PIVOTS TOWARD 45° POSITION WHEN LOWERING BOOM STRAPS.