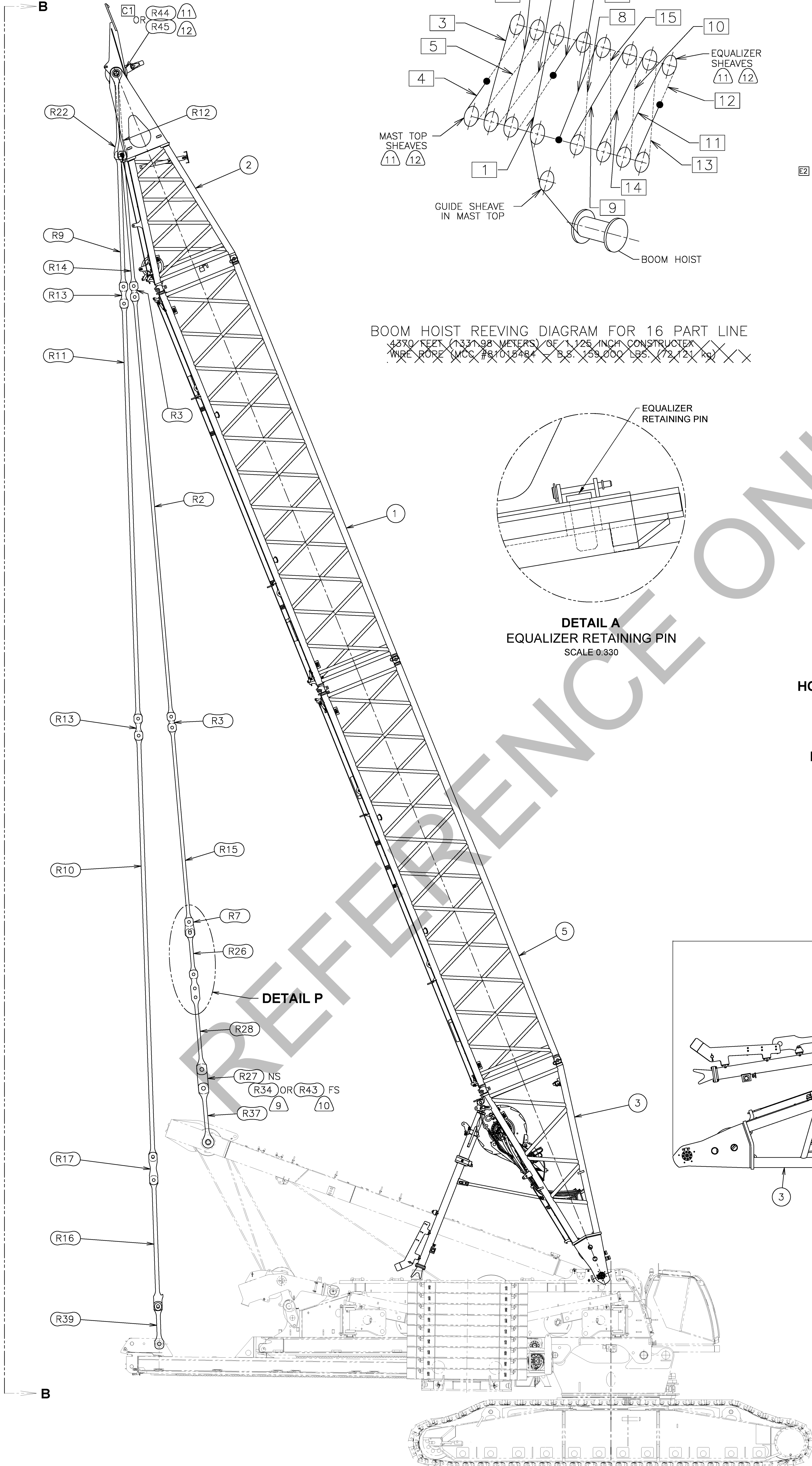
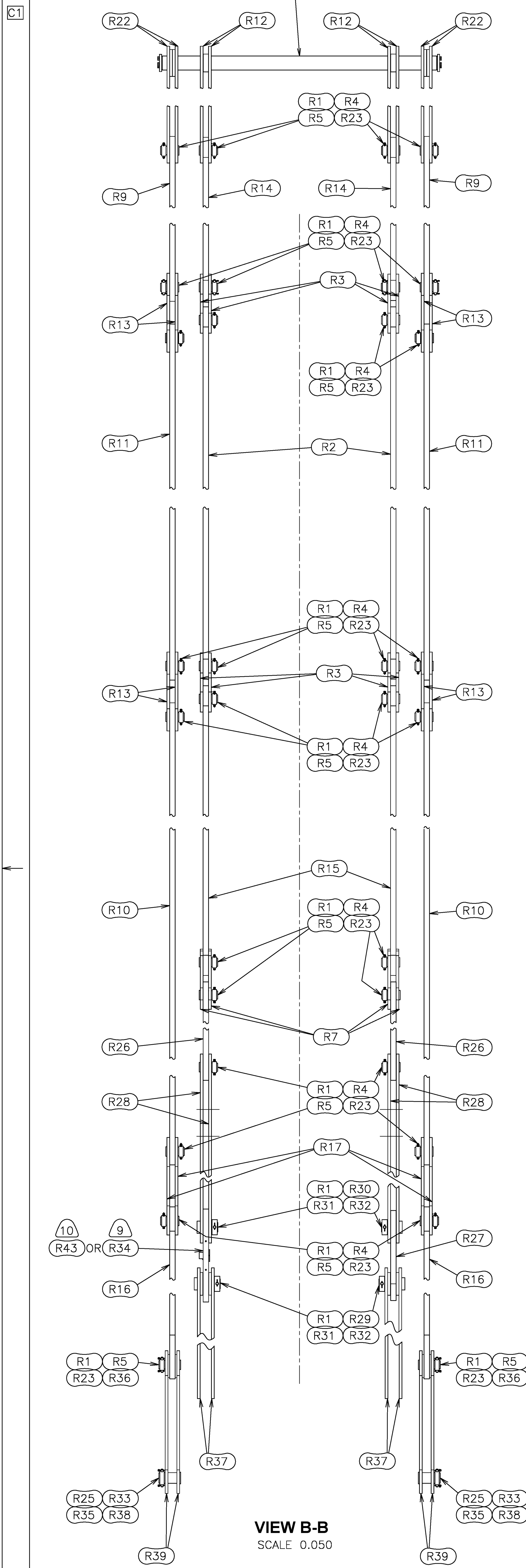
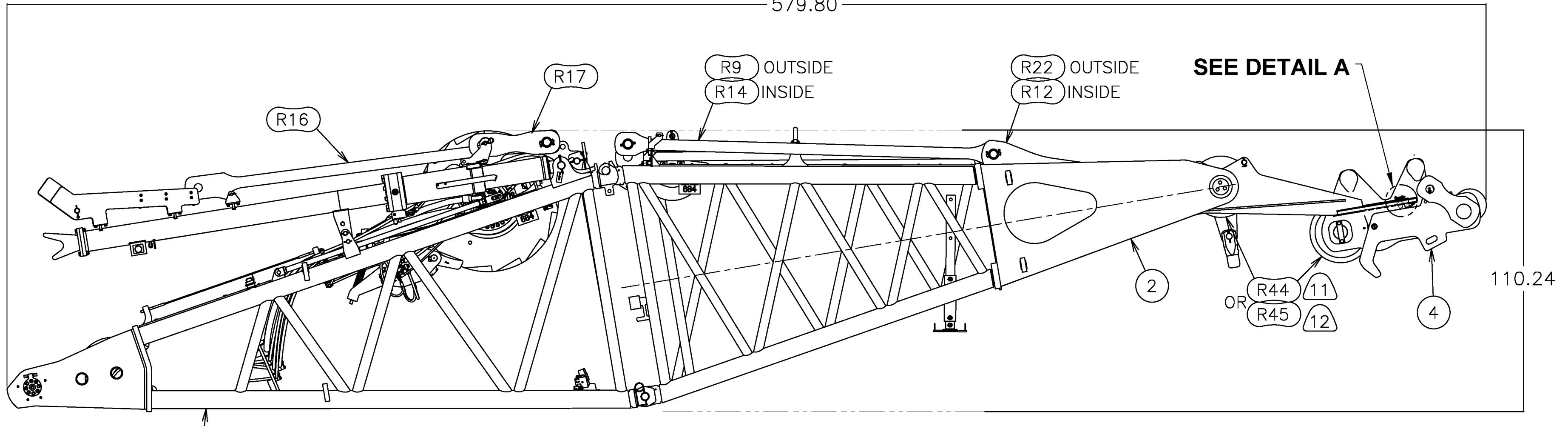
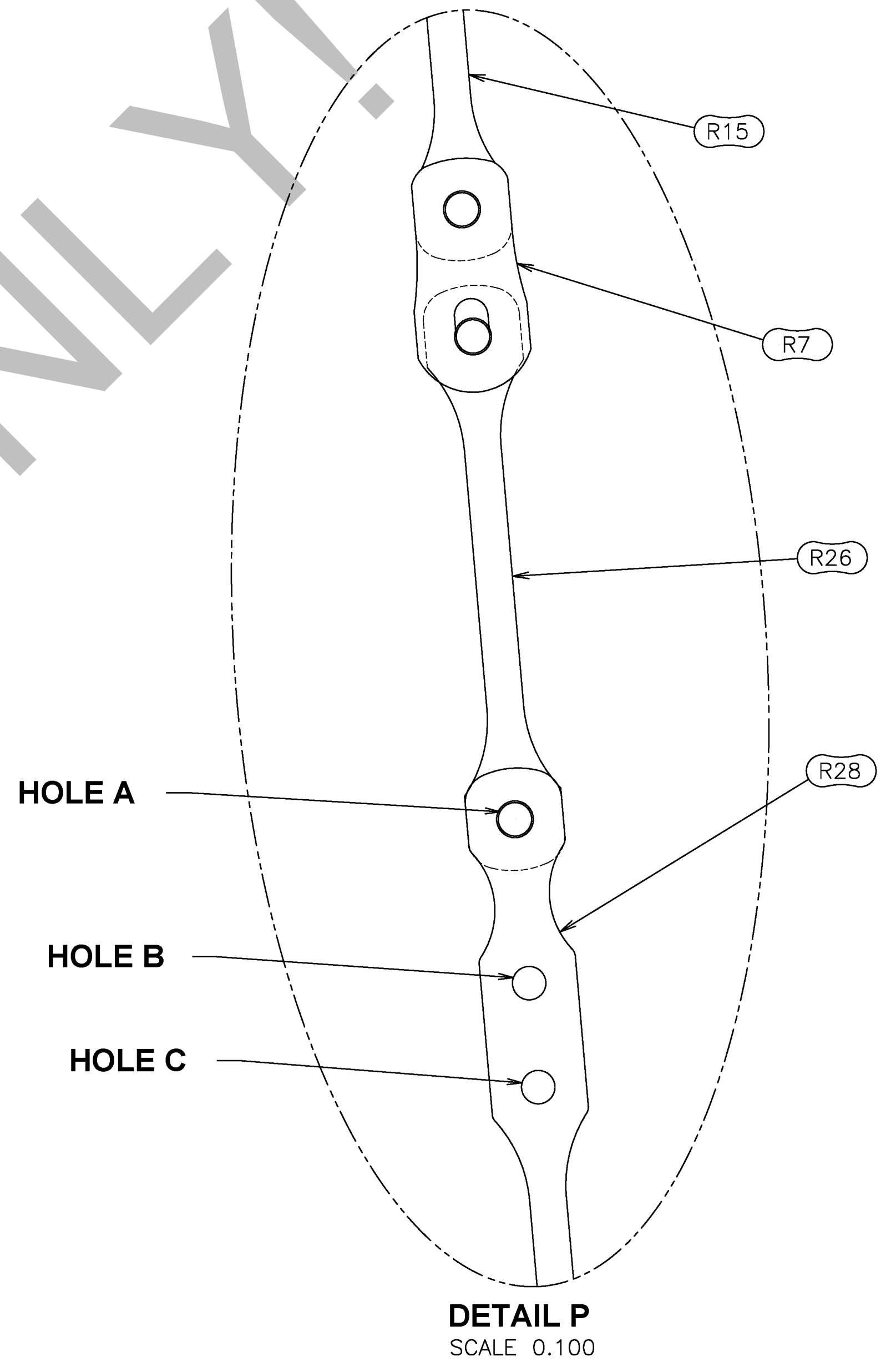
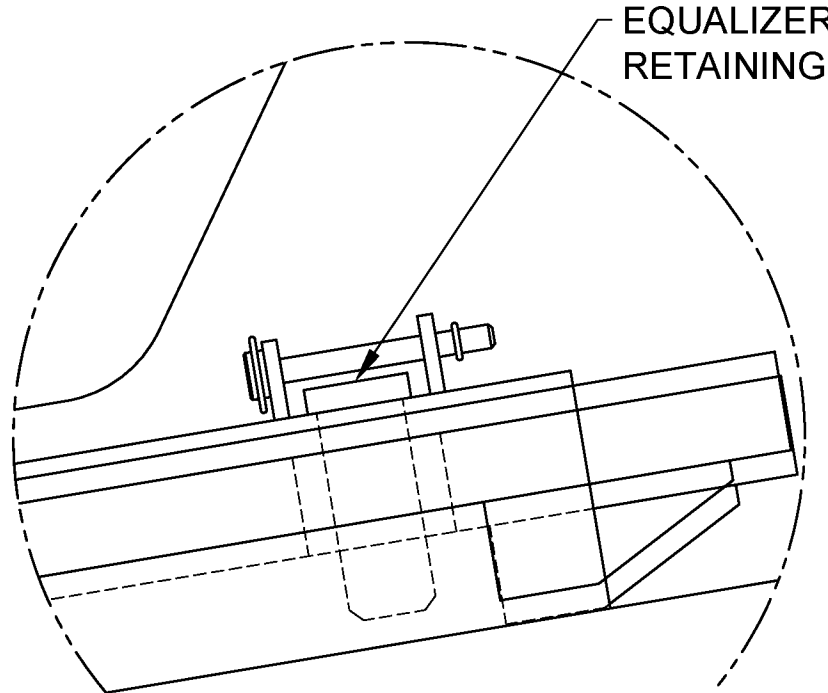




BOOM HOIST REEVING DIAGRAM FOR 16 PART LINE  
4230 FEET (1311 METERS) OF 1 1/2 INCH CONSTRUCTION  
WIRE ROPE LCC #8101268 5.8 153,000 LBS (73,721 kg)



MAST TRANSPORTATION PACKAGE  
TOTAL SHIPPING WEIGHT: 54,800 LBS (24,857 KGS)  
MAST BUTT (ITEM 3): 21,803 LBS (9,890 KGS)  
MAST TOP (ITEM 2): 18,400 LBS (8,346 KGS)  
EQUALIZER (ITEM 4): 4,057 LBS (1,840 KGS)  
DRUM 5 ROPE: 10,540 LBS (4,781 KGS)

- 1 TOP 6M I.D. TAG #81025379
- 2 INSERT 12M (81025376) I.D. TAG #81025377
- 3 INSERT 12M (81034593) I.D. TAG #81035741
- 4 BUTT 6M I.D. TAG #84041643
- 5 STRAPS/LINKS AND HARDWARE SHIPS WITH MAST ASSEMBLY 81022688.
- 6 LINKS AND HARDWARE SHIPS WITH VPC-MAX BEAM ASSEMBLY 81031411.
- 7 FOR ASSEMBLY AND RIGGING PURPOSE ONLY. STOWS IN STORAGE BOX 81028467.
- 8 FOR ASSEMBLY AND RIGGING PURPOSE ONLY. STOWS ON MAST BUTT (ITEM 3). SEE DETAIL U ON SHEET 2.
- 9 LOAD CELL (R34) IS NOT PERMITTED FOR OPERATION IN B68 (80160857) AND B90 (80158563) BOOM RIGGINGS BUT MAY BE USED IN ALL OTHER BOOM RIGGINGS.
- 10 LOAD CELL (R43) MAY BE USED IN ALL BOOM RIGGINGS AND IS REQUIRED FOR B68 (80160857) AND B90 (80158563) BOOM RIGGINGS.
- 11 SHEAVES SHIP WITH TOP ASSY (ITEM 2) AND EQUALIZER ASSY (ITEM 4).
- 12 SHEAVES (R44) IN TOP ASSY (ITEM 2) AND EQUALIZER ASSY (ITEM 4) ARE NOT PERMITTED FOR OPERATION IN B68 (80160857) AND B90 (80158563) BOOM RIGGINGS BUT MAY BE USED IN ALL OTHER BOOM RIGGINGS.
- 13 SHEAVES (R45) IN TOP ASSY (ITEM 2) AND EQUALIZER ASSY (ITEM 4) MAY BE USED IN ALL BOOM RIGGING CONFIGURATIONS AND ARE REQUIRED FOR B68 (80160857) AND B90 (80158563) BOOM RIGGINGS.

| BILL OF MATERIAL      |                                      |          |          | ASSEMBLIES USED ON |      |
|-----------------------|--------------------------------------|----------|----------|--------------------|------|
| ITEM NO.              | DESCRIPTION                          | QTY      | MATERIAL | CODE NO.           | REV. |
| MAST RIGGING M11:684  |                                      |          |          |                    |      |
| 1                     | INSERT ASSY #684, 12M                | 2        | 81025376 | 2                  |      |
| 2                     | MAST ASSY #684, 6M TOP               | 1        | 81025378 | 1                  |      |
| 3                     | MAST ASSY #684, 6M BUTT              | 4        | 84041644 | 4                  |      |
| 4                     | EQUALIZER ASSY                       | 8        | 81027149 |                    |      |
| 5                     | INSERT ASSY #684, 12M                | 3        | 81034593 | 3                  |      |
| BASIC REFERENCE ITEMS |                                      |          |          |                    |      |
| R192                  | PIN COTTER 1/4 DIA X 1.50 LG         | 562105   |          |                    |      |
| R2                    | STRAP 12M #680, 681, 682             | 81020475 |          |                    |      |
| R3                    | LINK #680 BOOM                       | 81020476 |          |                    |      |
| R430                  | PIN 1 HOLE W/HD 79.3 DIA X 121.1 LG  | 81020477 |          |                    |      |
| R532                  | COLLAR 80.2MM I.D.                   | 81020478 |          |                    |      |
| R6                    | SHACKLE 17 MTON                      | 81024427 |          |                    |      |
| R7                    | LINK #680, 4M INSERT                 | 81027236 |          |                    |      |
| R8                    | SHACKLE 40MT ALLOY                   | 81030038 |          |                    |      |
| R9                    | STRAP TOP #684 MAST 50.8 X 109.0     | 81034595 |          |                    |      |
| R10                   | STRAP 12M #684 MAST 50.8 X 109.0     | 81034597 |          |                    |      |
| R11                   | STRAP 12M #684 MAST 50.8 X 109.0     | 81034598 |          |                    |      |
| R12                   | LINK STRAP                           | 81034600 |          |                    |      |
| R13                   | LINK STRAP                           | 81034602 |          |                    |      |
| R14                   | STRAP 6M #684 MAST TOP               | 81036855 |          |                    |      |
| R15                   | STRAP 12M #684 MAST                  | 81036856 |          |                    |      |
| R16                   | STRAP 3.7M MAST 50.8 X 108.6         | 81036999 |          |                    |      |
| R17                   | LINK                                 | 81037000 |          |                    |      |
| R18                   | SLING LIFTING 100,000 LBSX10.83 FT   | 81038731 |          |                    |      |
| R19                   | SLING LIFTING 20,000 LBSX5.25 FT     | 81038797 |          |                    |      |
| R20                   | BUSHING 100X53X75.8                  | 81038828 |          |                    |      |
| R21                   | SLING 70000 LBS 16.4 FT              | 81042116 |          |                    |      |
| R22                   | LINK ASSY                            | 81042471 |          |                    |      |
| R23                   | PIN 2 HOLE 19.05 DIA X 117.0 LG      | A16804   |          |                    |      |
| R24                   |                                      |          |          |                    |      |
| R25                   | PIN COTTER 3/16 DIA X 1.50 LG        | 562085   |          |                    |      |
| R26                   | STRAP 4M #680                        | 81022539 |          |                    |      |
| R27                   | LINK LIVE MAST                       | 81026646 |          |                    |      |
| R28                   | LINK LIVE MAST                       | 81026647 |          |                    |      |
| R29                   | PIN 1 HOLE W/HD 105.7 DIA X 170.0 LG | 81028072 |          |                    |      |
| R30                   | PIN 1 HOLE W/HD 105.7 DIA X 120.0 LG | 81028073 |          |                    |      |
| R31                   | COLLAR 139.7 X 106.0 ID X 50 LG      | 81028074 |          |                    |      |
| R32                   | PIN 2 HOLE 25.4 DIA X 157.0 LG       | 81028216 |          |                    |      |
| R33                   | COLLAR 131.0 MM ID                   | 81033386 |          |                    |      |
| R34                   | LOAD CELL LINK 238,140 KGS           | 81034118 |          |                    |      |
| R35                   | PIN 2 HOLE 12.7 DIA X 167.0 LG       | 81039284 |          |                    |      |
| R36                   | PIN 1 HOLE W/HD 79.3 DIA X 153.1 LG  | 81039569 |          |                    |      |
| R37                   | LINK ASSY                            | 81042456 |          |                    |      |
| R38                   | PIN 1 HOLE 130.0 X 175.0 LG          | 81020965 |          |                    |      |
| R39                   | LINK ASSY                            | 84020978 |          |                    |      |
| R40                   |                                      |          |          |                    |      |
| R41                   | PIN PULLER ASSY HAND HELD            | 81030756 |          |                    |      |
| R42                   | PIN PULLER CAGE WELDMENT             | 81040833 |          |                    |      |
| R43                   | LOAD CELL LINK 238,140 KGS           | 80161933 |          |                    |      |
| R44                   | SHEAVE ASSY 609.6 28.0               | 81025819 |          |                    |      |
| R45                   | SHEAVE ASSY 609.6 28.0               | 80128133 |          |                    |      |

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TOLERANCE UNLESS OTHERWISE SPECIFIED

| DIMENSION | 1 TO 10 FEET | 10 TO 30 FEET | 30 TO 60 FEET | 60 TO 100 FEET | 100 TO 150 FEET | 150 TO 200 FEET | 200 TO 250 FEET | 250 TO 300 FEET | 300 TO 350 FEET | 350 TO 400 FEET | 400 TO 450 FEET | 450 TO 500 FEET | 500 TO 550 FEET | 550 TO 600 FEET | 600 TO 650 FEET | 650 TO 700 FEET | 700 TO 750 FEET | 750 TO 800 FEET | 800 TO 850 FEET | 850 TO 900 FEET | 900 TO 950 FEET | 950 TO 1000 FEET |       |  |
|-----------|--------------|---------------|---------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|-------|--|
| (1) PLACE | 0.00         | 0.12          | 0.18          | 0.25           | 0.31            | 0.37            | 0.43            | 0.49            | 0.55            | 0.61            | 0.67            | 0.73            | 0.79            | 0.85            | 0.91            | 0.97            | 1.03            | 1.09            | 1.15            | 1.21            | 1.27            | 1.33             | 1.39  |  |
| (2) PLACE | 0.00         | 0.08          | 0.12          | 0.16           | 0.20            | 0.24            | 0.28            | 0.32            | 0.36            | 0.40            | 0.44            | 0.48            | 0.52            | 0.56            | 0.60            | 0.64            | 0.68            | 0.72            | 0.76            | 0.80            | 0.84            | 0.88             | 0.92  |  |
| (3) PLACE | 0.000        | 0.008         | 0.012         | 0.016          | 0.020           | 0.024           | 0.028           | 0.032           | 0.036           | 0.040           | 0.044           | 0.048           | 0.052           | 0.056           | 0.060           | 0.064           | 0.068           | 0.072           | 0.076           | 0.080           | 0.084           | 0.088            | 0.092 |  |
| ANGLES    | ±1.30        |               |               |                |                 |                 |                 |                 |                 |                 |                 |                 | ±0.30           |                 |                 |                 |                 |                 |                 |                 |                 |                  |       |  |

MANITOWOC CRANES, Inc.

Manitowoc, Wisconsin

CK:MUJ

APP:JRR

DATE

REV. LTR.

84050187

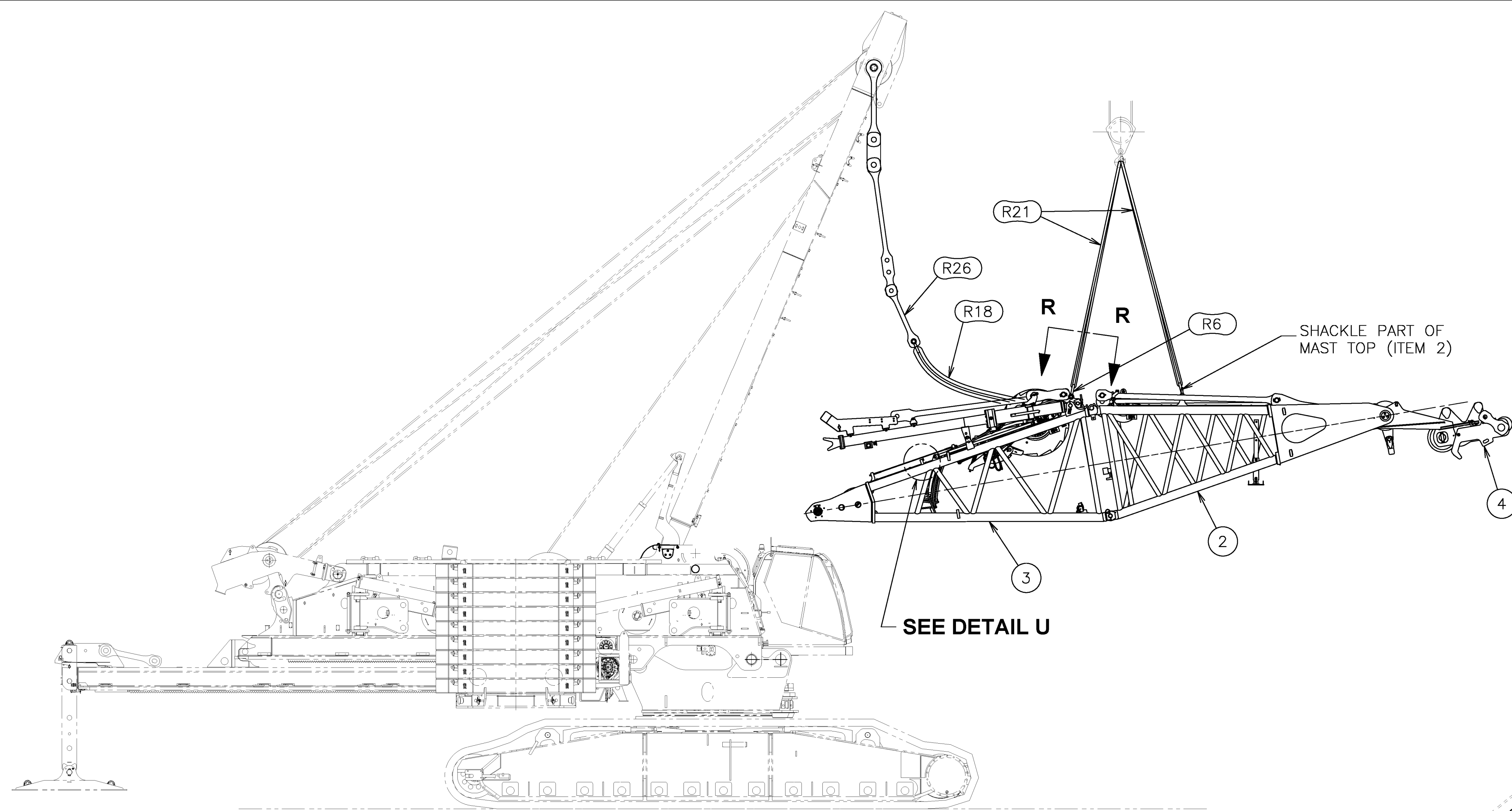
MAST RIGGING

M11:684

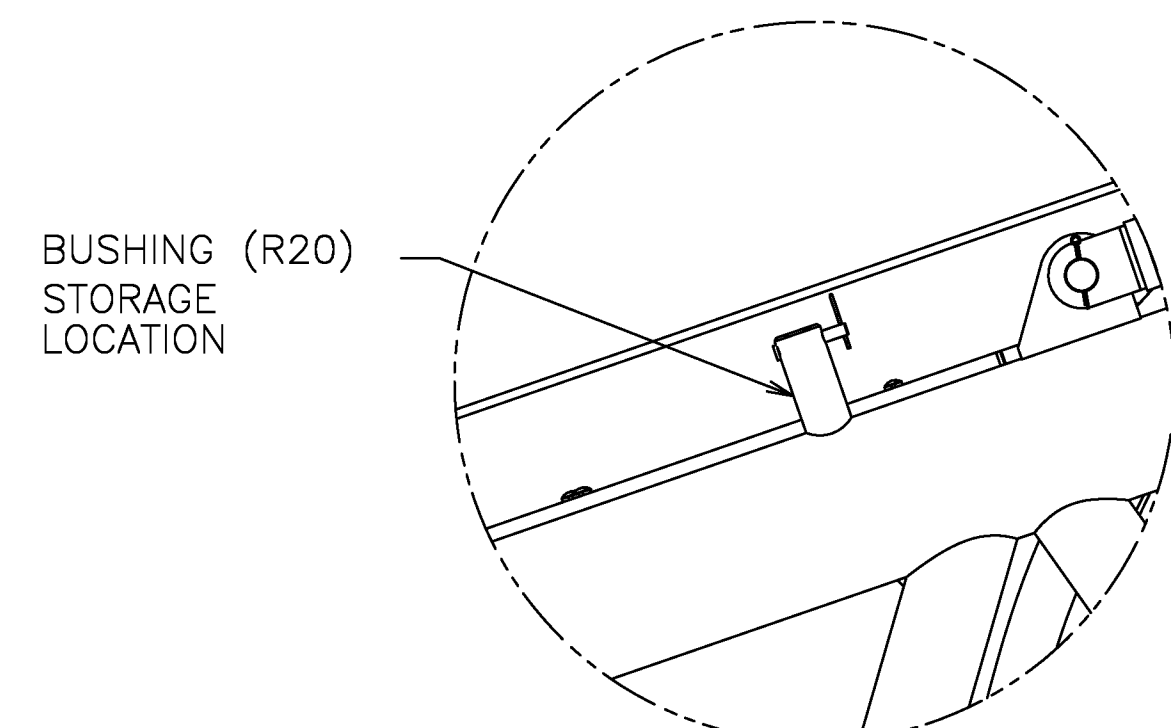
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12-19-16

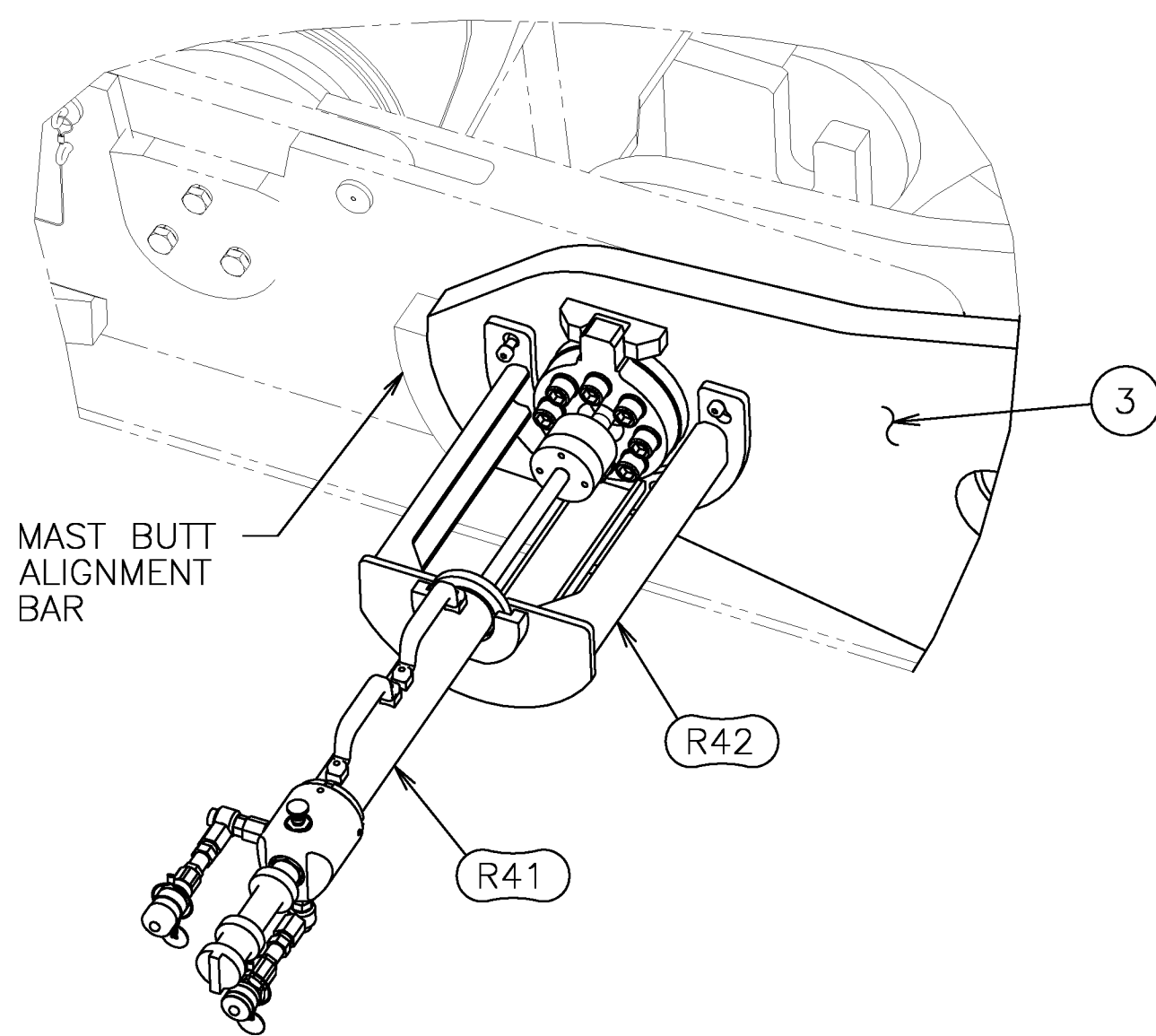
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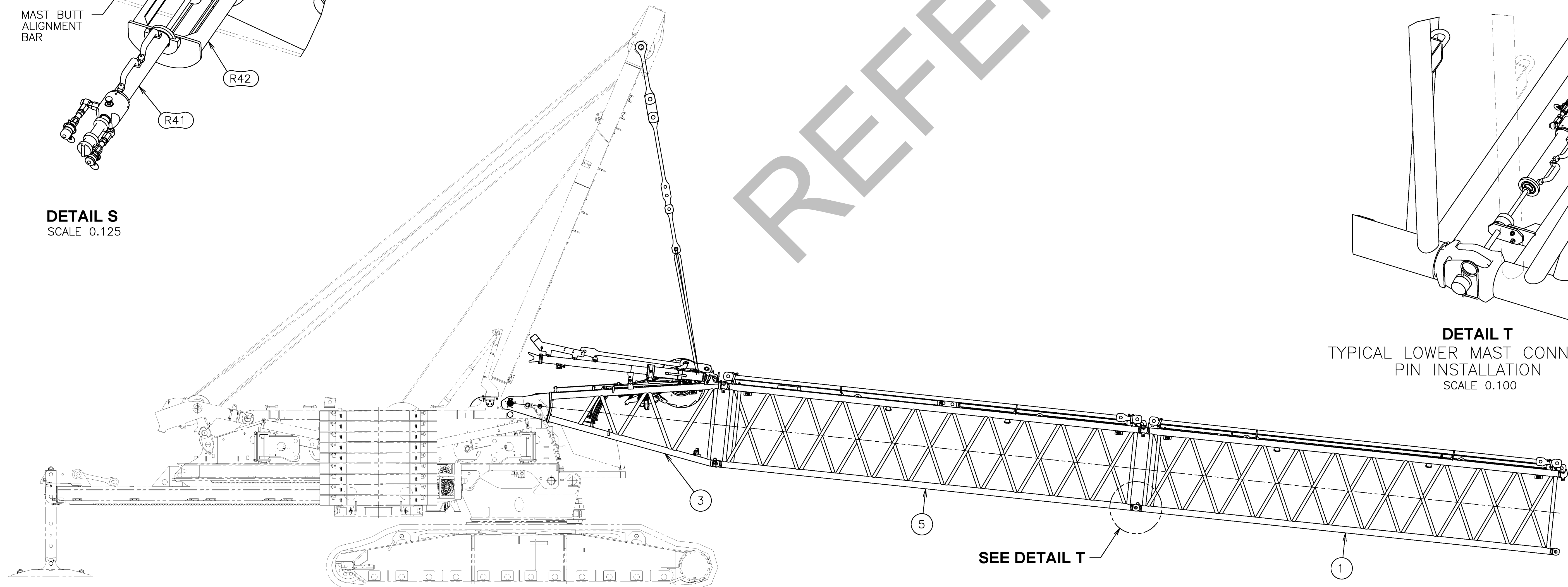
VIEW C  
HANDLING OF MAST BUTT/TOP ASSEMBLY



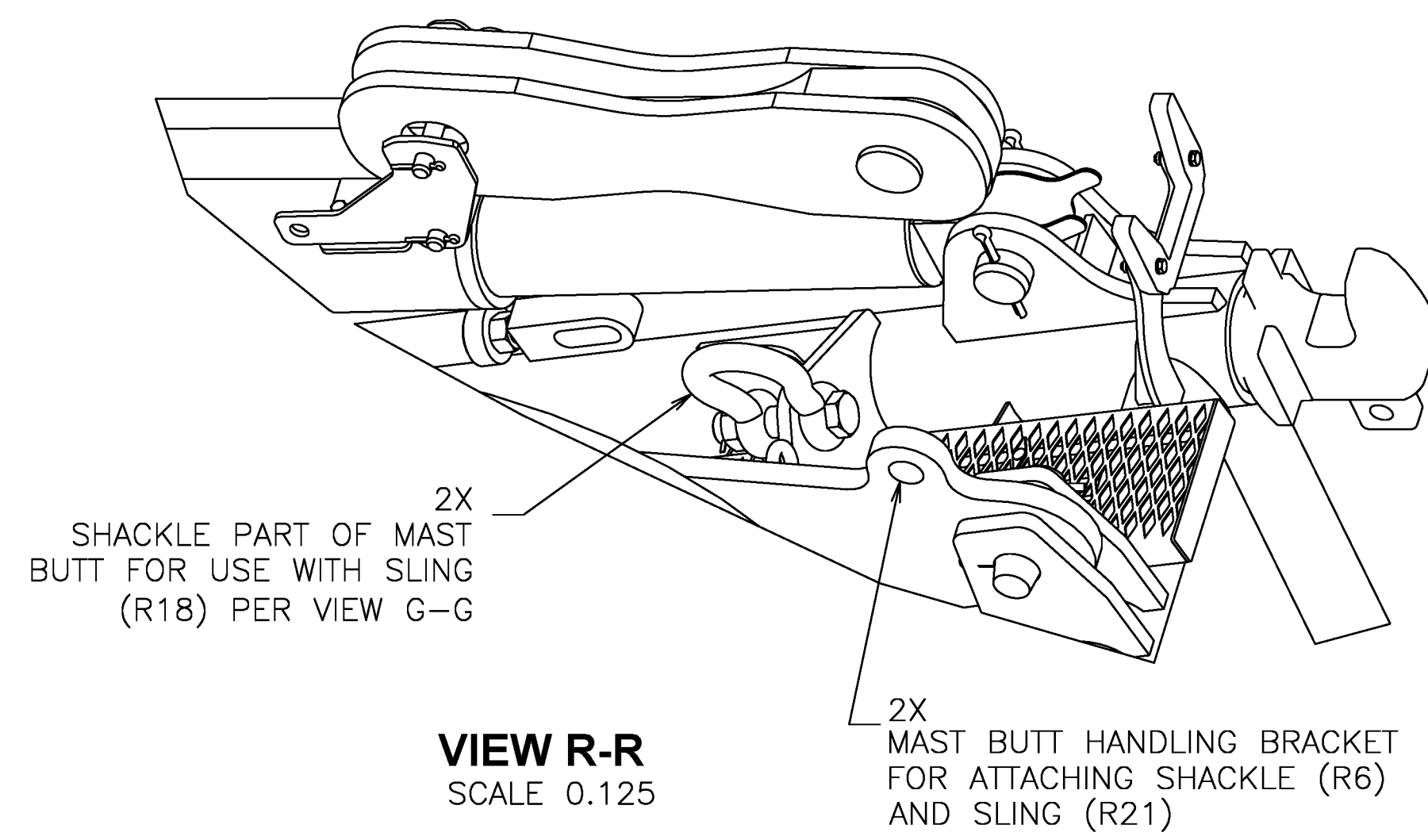
DETAIL U  
SCALE 0.125



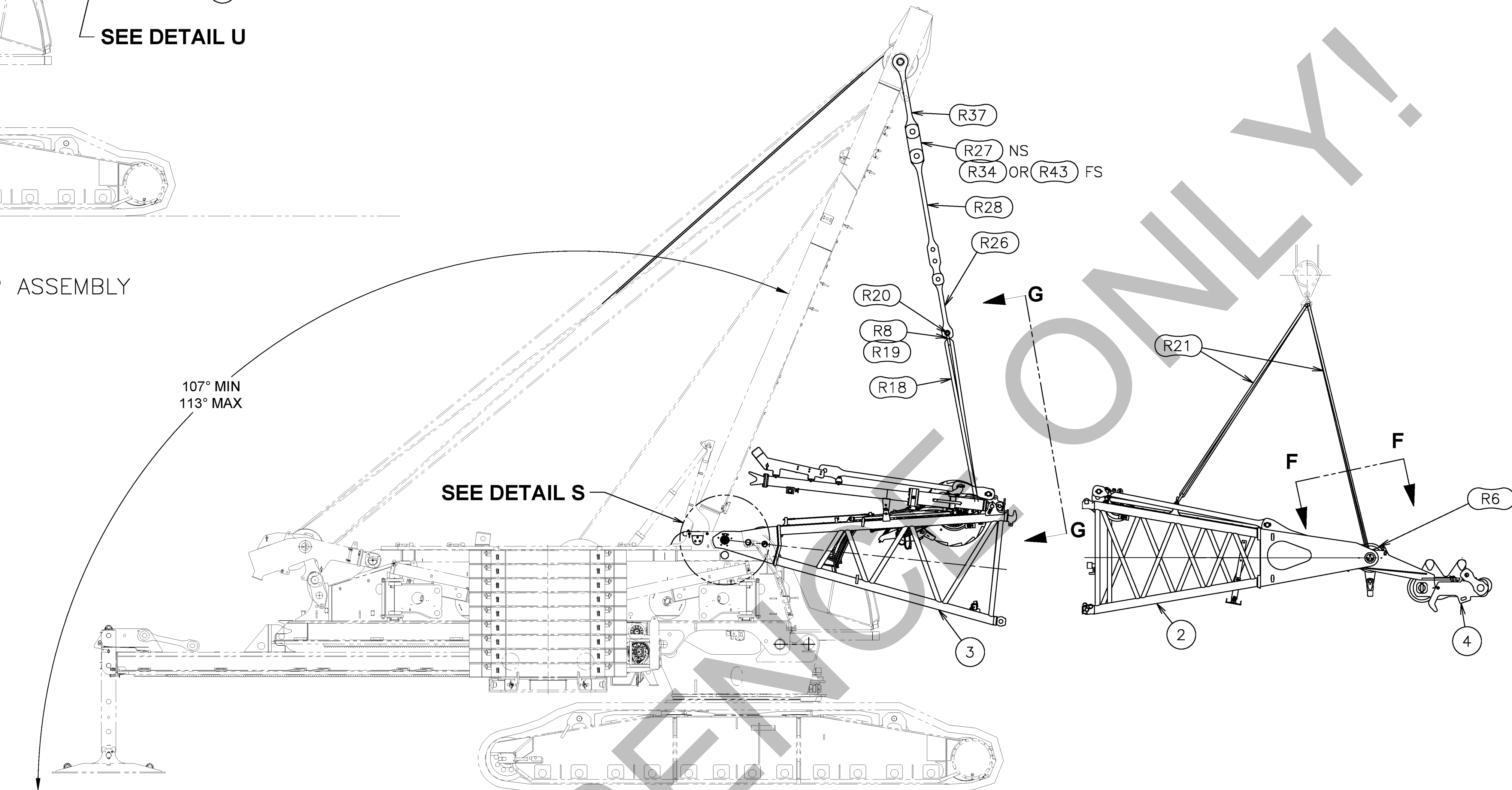
DETAIL S  
SCALE 0.125



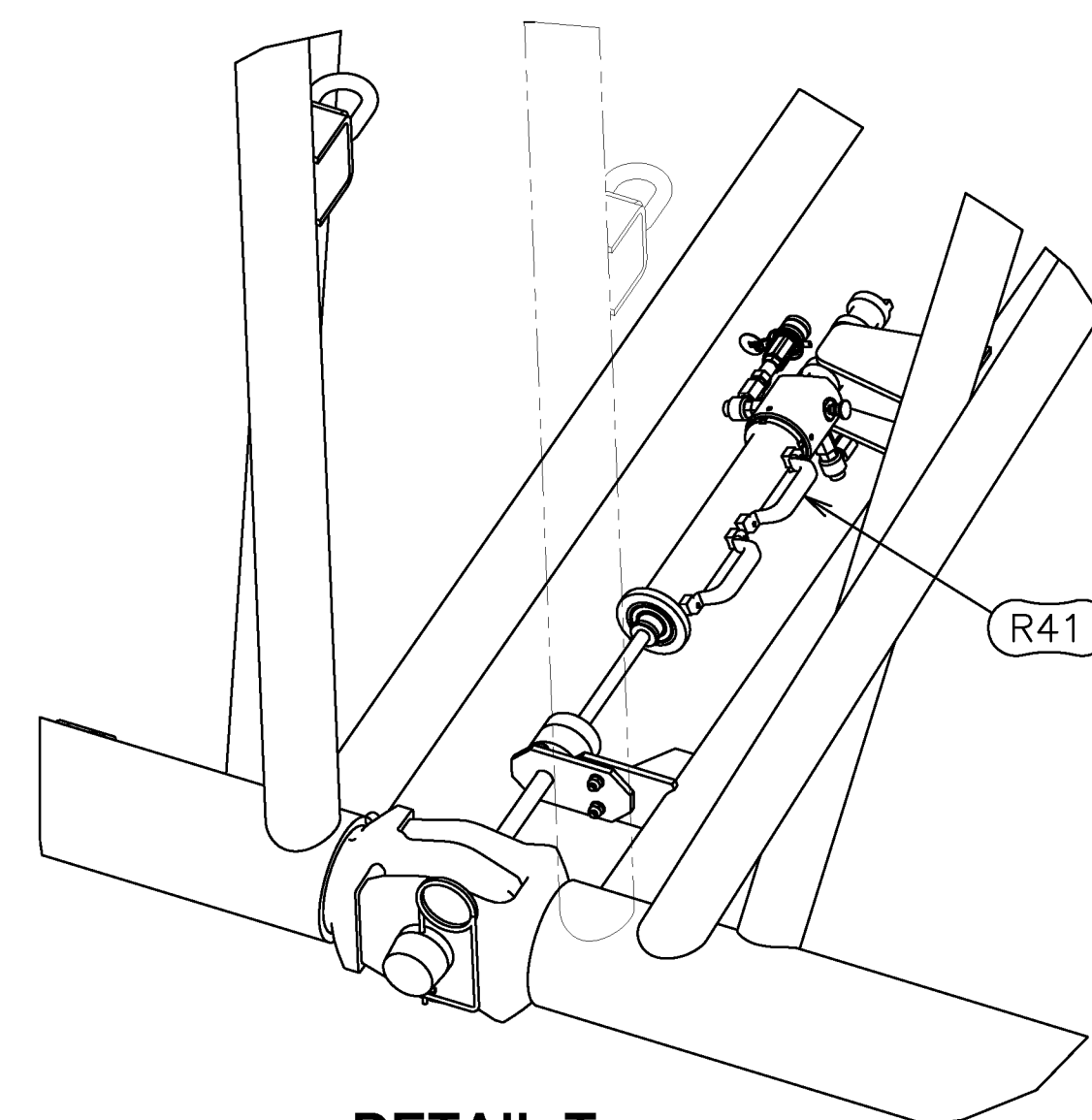
VIEW E  
ASSEMBLY OF MAST INSERTS



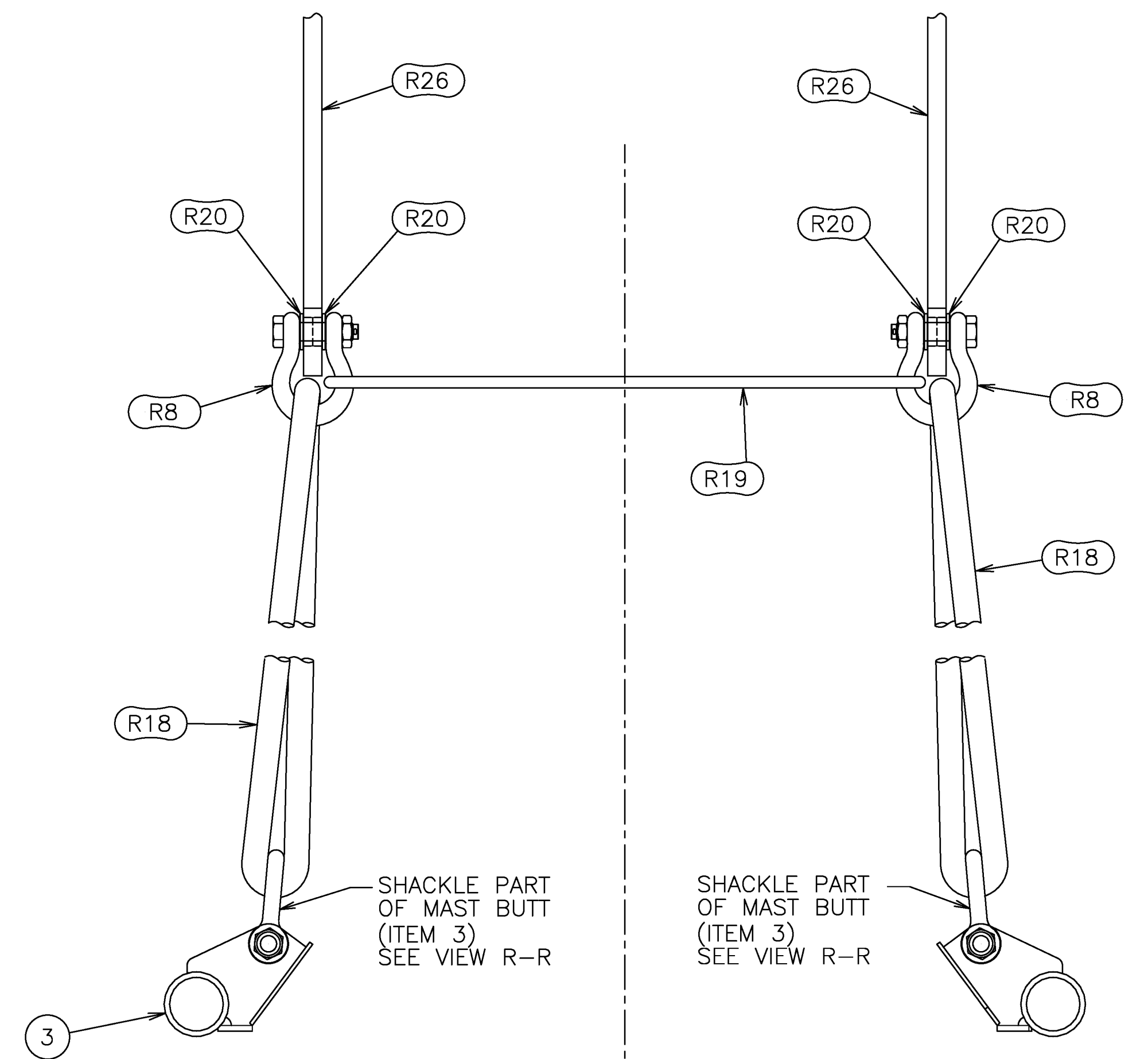
VIEW R-R  
SCALE 0.125



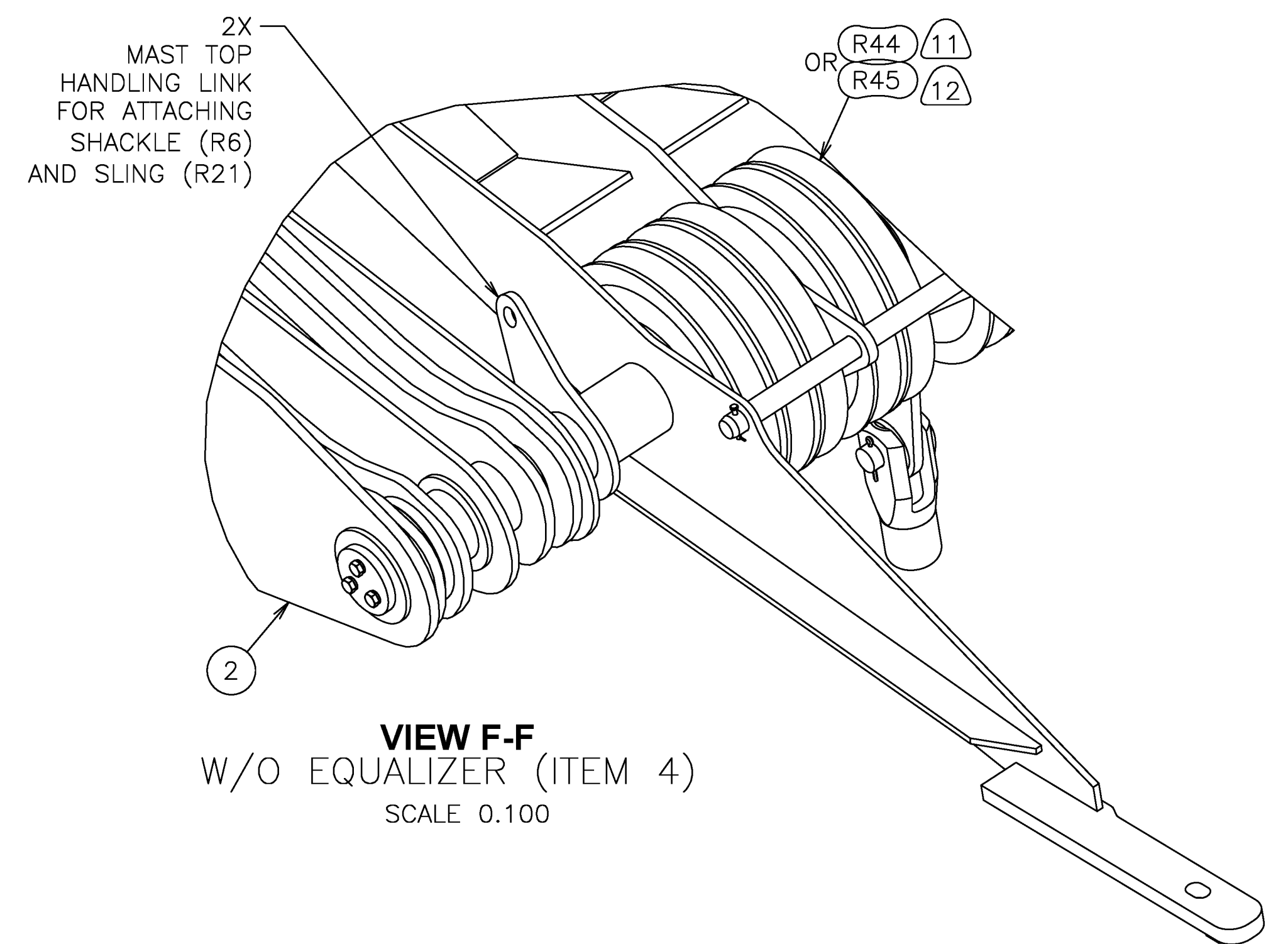
VIEW D  
MAST BUTT ASSEMBLY TO ROTATING BED  
AND SEPARATION OF MAST TOP FROM MAST BUTT



DETAIL T  
TYPICAL LOWER MAST CONNECTOR  
PIN INSTALLATION  
SCALE 0.100



VIEW G-G  
SCALE 0.080



VIEW F-F  
W/O EQUALIZER (ITEM 4)  
SCALE 0.100

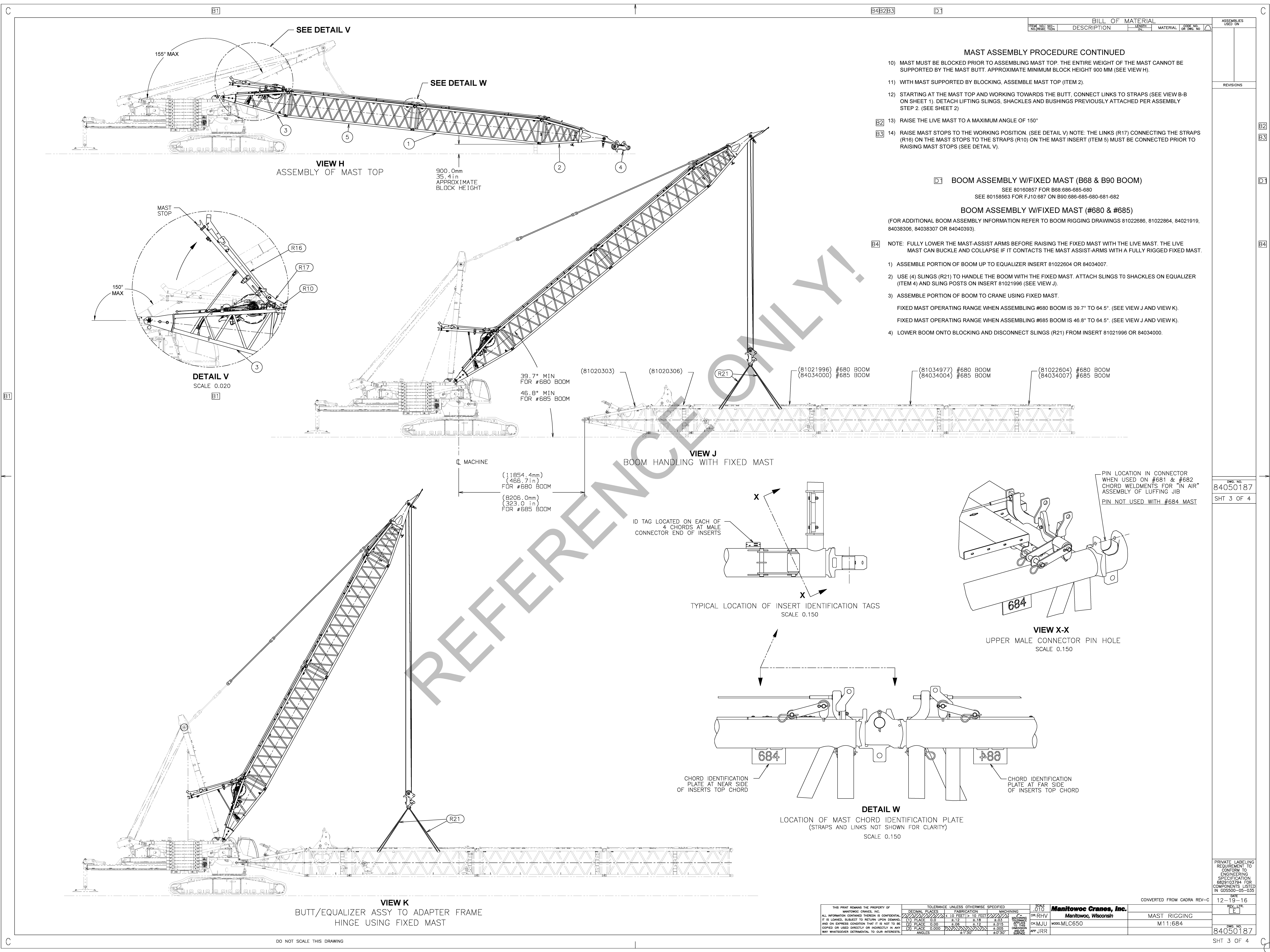
### MAST ASSEMBLY PROCEDURE

- 1) ASSEMBLE VPC-MAX BEAM, AUXILIARY MEMBER, AND SERIES 1,2, OR 3 COUNTERWEIGHTS.
- 2) ATTACH LIFTING SLINGS AND SHACKLES TO LIVE MAST LINKS (R26) AND FIXED MAST BUTT (ITEM 3) AS SHOWN IN VIEW G-G.
- 3) ATTACH ASSIST CRANE TO MAST BUTT/TOP ASSEMBLY USING (4) SLINGS (R21) AND AN ADDITIONAL (2) SHACKLES (R6). (SEE VIEW R-R).
- 4) RAISE LIVE MAST WHILE LIFTING FIXED MAST BUTT/TOP INTO PLACE. LIFTING SLINGS FROM LIVE MAST SHOULD REMAIN SLACK WHILE ASSEMBLING FIXED MAST BUTT/TOP (SEE VIEW C).
- 5) ALIGN MAST BUTT HINGE PIN HOLES WITH ROTATING BED PIN HOLES. POSITION PIN PULLER (R41) INTO PIN PULLER CAGE WELDMENT (R42) AND ACTIVATE CYLINDER TO INSTALL MAST HINGE PIN INTO ROTATING BED (SEE DETAIL S).
- 6) POSITION LIVE MAST BETWEEN 107° AND 113° AND ENGAGE MAST HOIST DRUM PAWL. LOWER FIXED MAST BUTT/TOP ASSEMBLY WITH ASSIST CRANE UNTIL THE LIVE MAST IS SUPPORTING THE ASSEMBLY.  
  
WARNING: LIVE MAST ANGLES GREATER THAN 113° WILL DAMAGE COMPONENTS
- 7) DISCONNECT SLINGS (R21) FROM MAST BUTT (ITEM 3) AND ATTACH THEM TO THE LINK ON THE MAST TOP SHAFT (SEE VIEW F-F). THE ASSIST CRANE WILL BE USED TO SEPARATE THE MAST TOP (ITEM 2) FROM THE BUTT.
- 8) REMOVE THE LOWER PIN CONNECTING THE MAST BUTT AND TOP. SEPARATE THE MAST TOP FROM THE BUTT (SEE VIEW D).
- 9) ASSEMBLE MAST INSERTS (ITEM 1 AND 5). BOTH INSERTS CAN BE CANTILVERED FROM THE MAST BUTT (SEE VIEW E). (FOR LOWER CONNECTOR PIN INSTALLATION SEE DETAIL T).

CONVERTED FROM CADRA REV-C

| BILL OF MATERIAL                                                                                                                                                                                                                                                                                     |      |             |          | ASSEMBLIES USED ON     |                      |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-------------|----------|------------------------|----------------------|
| ITEM NO.                                                                                                                                                                                                                                                                                             | REV. | DESCRIPTION | QTY.     | MATERIAL               | CODE NO. OR DWG. NO. |
| PRIVATE LABELING REQUIREMENT TO CONFORM TO ENGINEERING SPECIFICATION 88281037M FOR COMPONENTS LISTED IN QDS500-05-035                                                                                                                                                                                |      |             |          |                        |                      |
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| TOLERANCE UNLESS OTHERWISE SPECIFIED                                                                                                                                                                                                                                                                 |      |             | SCALE    | Manitowoc Cranes, Inc. |                      |
| DECIMAL PLACES                                                                                                                                                                                                                                                                                       |      |             | 0.017    | Manitowoc, Wisconsin   |                      |
| FABRICATION                                                                                                                                                                                                                                                                                          |      |             | DR, RHV  | MAST RIGGING           |                      |
| MACHINING                                                                                                                                                                                                                                                                                            |      |             | CK, MJU  | M11:684                |                      |
| DIMENSION SURFACE                                                                                                                                                                                                                                                                                    |      |             | APP, JRR | 84050187               |                      |
| ANGLES                                                                                                                                                                                                                                                                                               |      |             |          | SHT 2 OF 4             |                      |

C



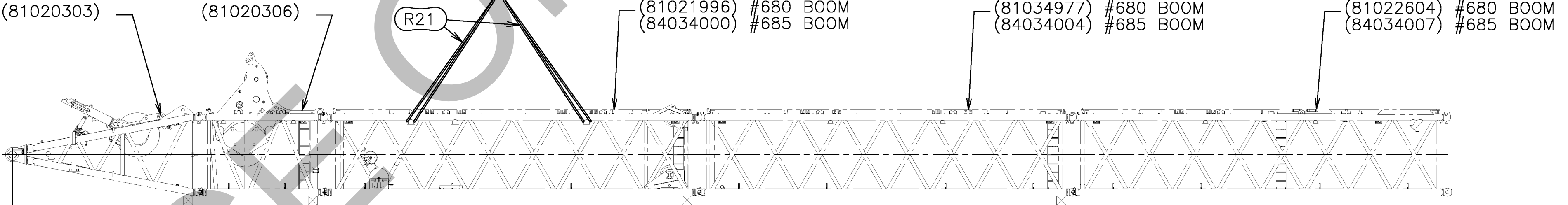
| BILL OF MATERIAL |          |             |      |      |
|------------------|----------|-------------|------|------|
| ITEM NO.         | SEC. NO. | DESCRIPTION | QTY. | UNIT |

- MAST ASSEMBLY PROCEDURE CONTINUED**
- 10) MAST MUST BE BLOCKED PRIOR TO ASSEMBLING MAST TOP. THE ENTIRE WEIGHT OF THE MAST CANNOT BE SUPPORTED BY THE MAST BUTT. APPROXIMATE MINIMUM BLOCK HEIGHT 900 MM (SEE VIEW H).
  - 11) WITH MAST SUPPORTED BY BLOCKING, ASSEMBLE MAST TOP (ITEM 2).
  - 12) STARTING AT THE MAST TOP AND WORKING TOWARDS THE BUTT, CONNECT LINKS TO STRAPS (SEE VIEW B-B ON SHEET 1). DETACH LIFTING SLINGS, SHACKLES AND BUSHINGS PREVIOUSLY ATTACHED PER ASSEMBLY STEP 2. (SEE SHEET 2)
  - 13) RAISE THE LIVE MAST TO A MAXIMUM ANGLE OF 150°
  - 14) RAISE MAST STOPS TO THE WORKING POSITION. (SEE DETAIL V) NOTE: THE LINKS (R17) CONNECTING THE STRAPS (R16) ON THE MAST STOPS TO THE STRAPS (R10) ON THE MAST INSERT (ITEM 5) MUST BE CONNECTED PRIOR TO RAISING MAST STOPS (SEE DETAIL V).

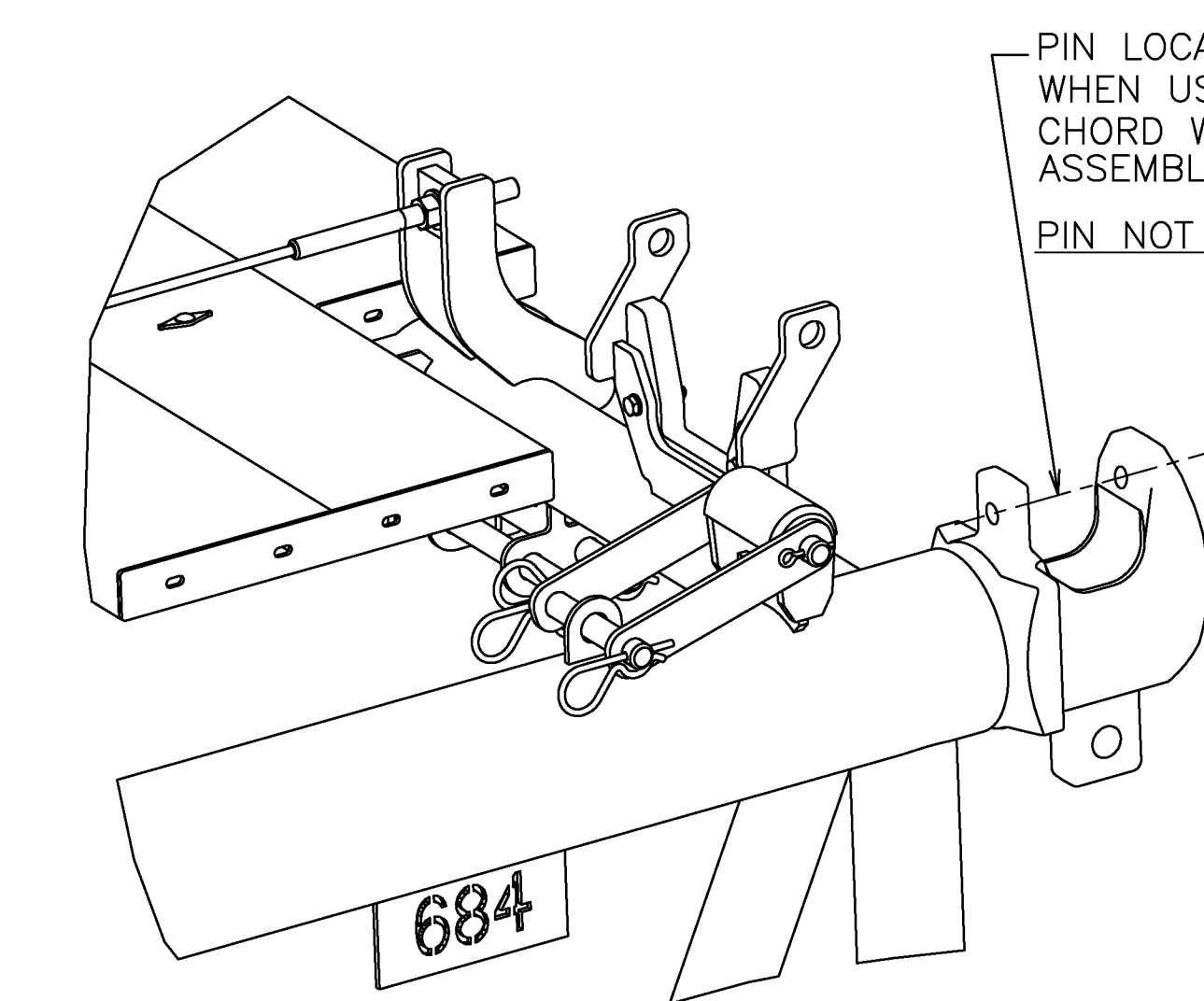
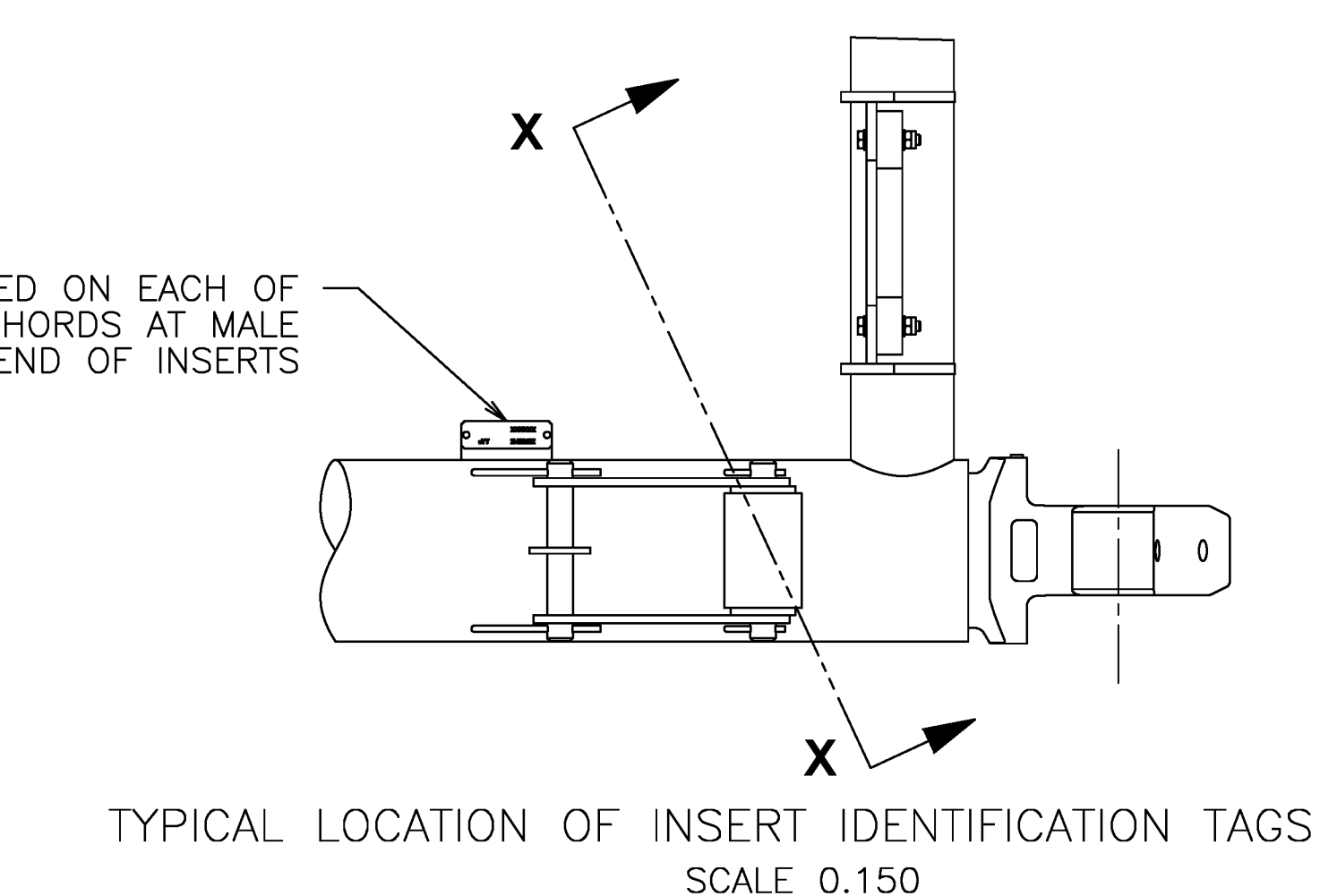
**BOOM ASSEMBLY W/FIXED MAST (B68 & B90 BOOM)**  
SEE 80160857 FOR B68-686-685-680  
SEE 80158563 FOR FJ10-687 ON B90-686-685-680-681-682

**BOOM ASSEMBLY W/FIXED MAST (#680 & #685)**  
(FOR ADDITIONAL BOOM ASSEMBLY INFORMATION REFER TO BOOM RIGGING DRAWINGS 81022686, 81022864, 84021919, 84038306, 84038307 OR 84040393).

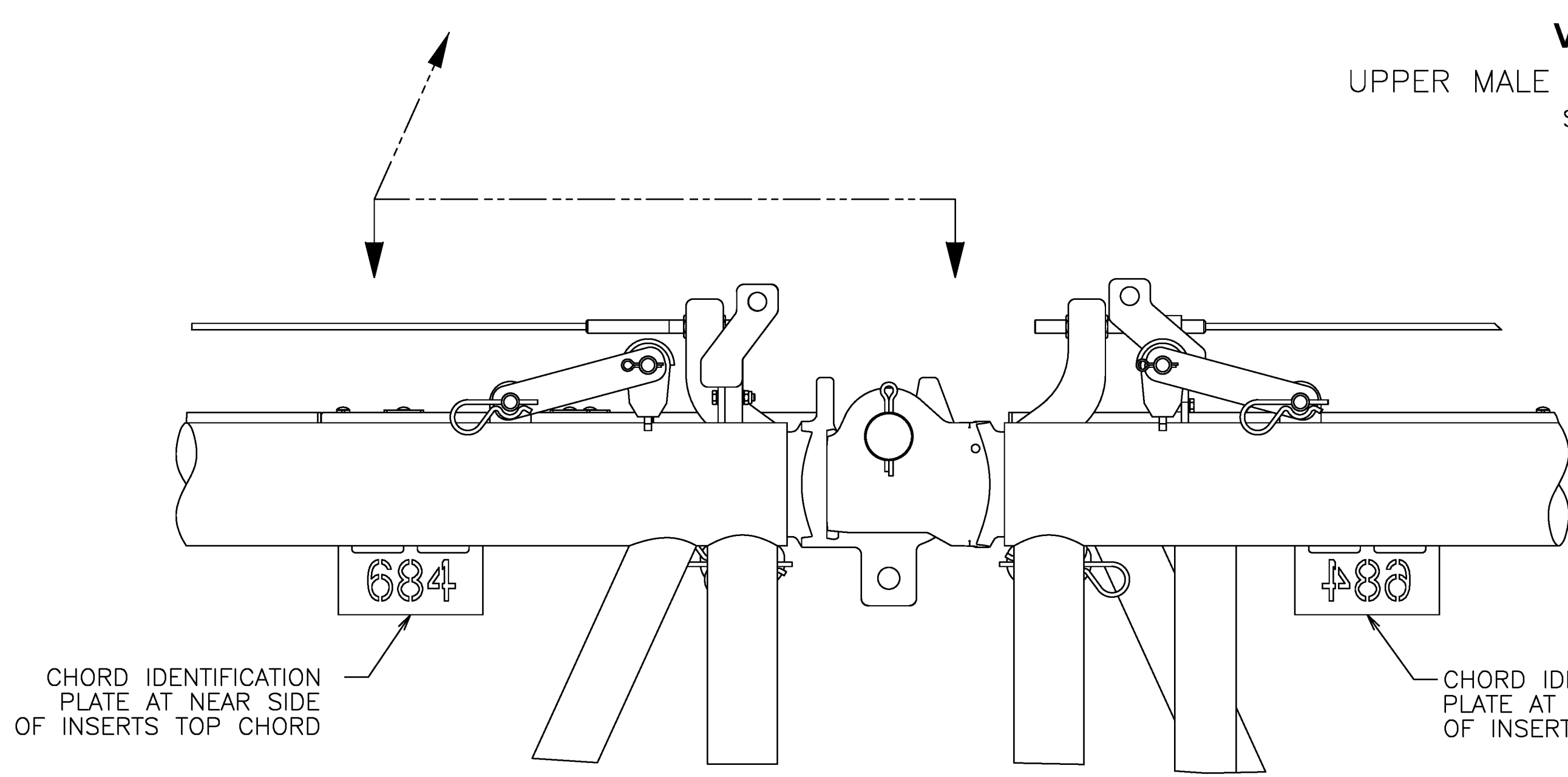
- NOTE:** FULLY LOWER THE MAST-ASSIST ARMS BEFORE RAISING THE FIXED MAST WITH THE LIVE MAST. THE LIVE MAST CAN BUCKLE AND COLLAPSE IF IT CONTACTS THE MAST ASSIST-ARMS WITH A FULLY RIGGED FIXED MAST.
- 1) ASSEMBLE PORTION OF BOOM UP TO EQUALIZER INSERT 81022604 OR 84034007.
  - 2) USE (4) SLINGS (R21) TO HANDLE THE BOOM WITH THE FIXED MAST. ATTACH SLINGS TO SHACKLES ON EQUALIZER (ITEM 4) AND SLING POSTS ON INSERT 81021996 (SEE VIEW J).
  - 3) ASSEMBLE PORTION OF BOOM TO CRANE USING FIXED MAST.  
FIXED MAST OPERATING RANGE WHEN ASSEMBLING #680 BOOM IS 39.7° TO 64.5°. (SEE VIEW J AND VIEW K).  
FIXED MAST OPERATING RANGE WHEN ASSEMBLING #685 BOOM IS 46.8° TO 64.5°. (SEE VIEW J AND VIEW K).
  - 4) LOWER BOOM ONTO BLOCKING AND DISCONNECT SLINGS (R21) FROM INSERT 81021996 OR 84034000.



**VIEW J**  
BOOM HANDLING WITH FIXED MAST



**VIEW X-X**  
UPPER MALE CONNECTOR PIN HOLE  
SCALE 0.150



**DETAIL W**  
LOCATION OF MAST CHORD IDENTIFICATION PLATE  
(STRAPS AND LINKS NOT SHOWN FOR CLARITY)  
SCALE 0.150

**VIEW K**  
BUTT/EQUALIZER ASSY TO ADAPTER FRAME  
HINGE USING FIXED MAST

|                                                                                                                                                                                                                                                                                              |  |                                                                                                                                                                                                               |  |                                                          |                                                               |                         |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|----------------------------------------------------------|---------------------------------------------------------------|-------------------------|
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|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|----------------------------------------------------------|---------------------------------------------------------------|-------------------------|

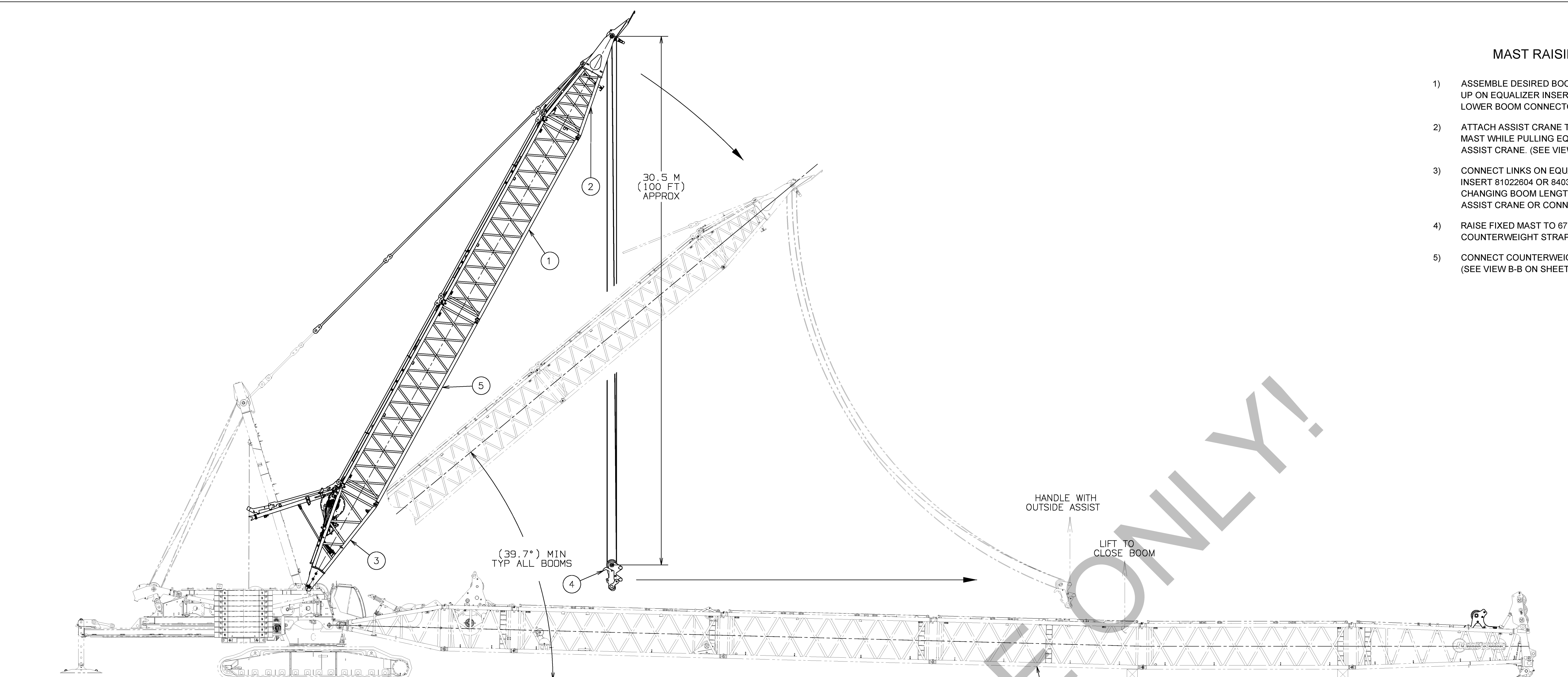
PRIVATE LABELING  
REQUIREMENT TO  
CONFORM TO  
ENGINEERING  
SPECIFICATION  
882910794 FOR  
COMPONENTS LISTED  
IN QDS500-05-035

DATE  
12-19-16

REV. LTR.  
E

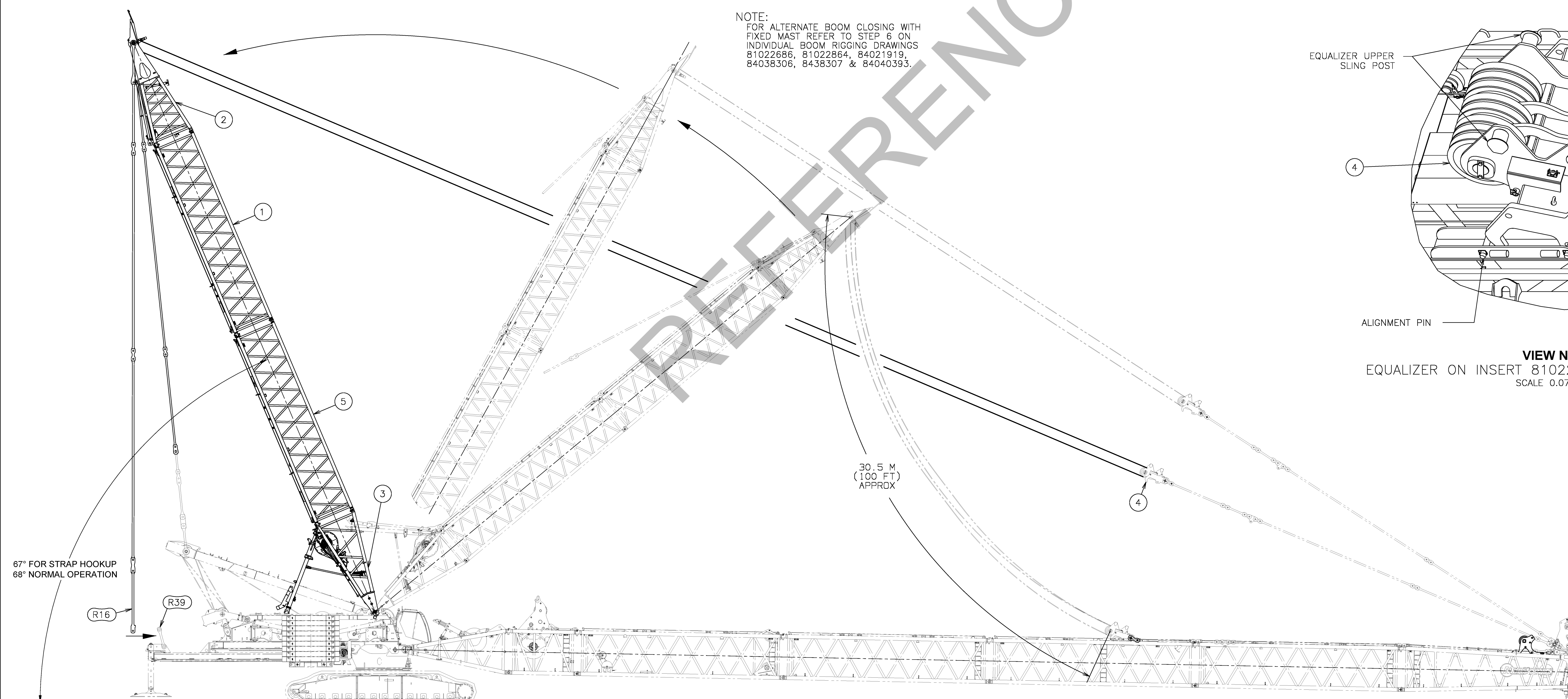
DWG. NO.  
84050187

SHT 3 OF 4

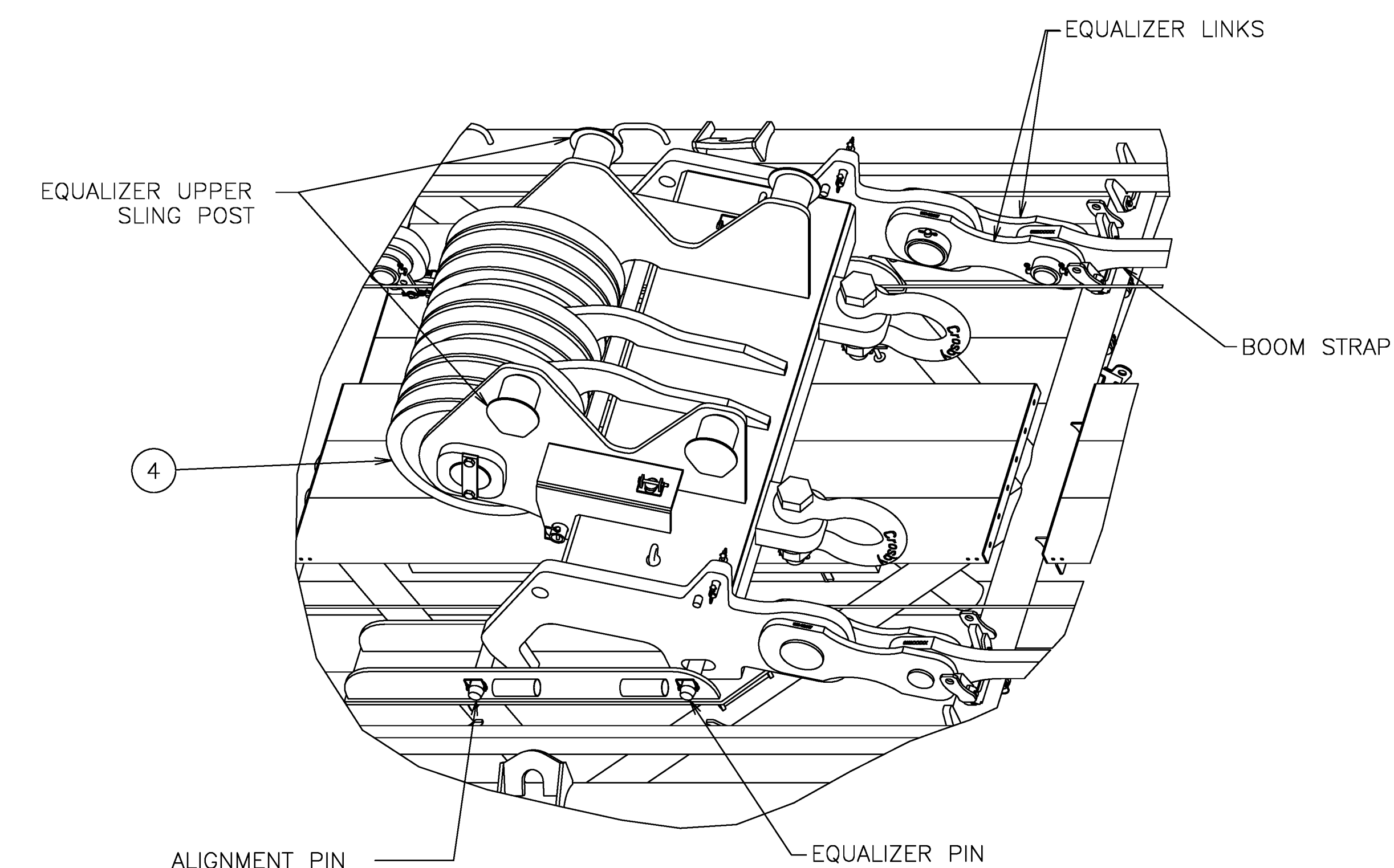


**VIEW L**  
BOOM CLOSING WITH OUTSIDE ASSIST

NOTE:  
FOR ALTERNATE BOOM CLOSING WITH  
FIXED MAST REFER TO STEP 6 ON  
INDIVIDUAL BOOM RIGGING DRAWINGS  
81022686, 81022864, 84021919,  
84038306, 8438307 & 84040393.



**VIEW M**  
EQUALIZER TO STRAPS ASSEMBLY



**VIEW N**  
EQUALIZER ON INSERT 81022604 OR 84034007  
SCALE 0.070

| BILL OF MATERIAL |            |         |             |            |          | ASSEMBLIES USED ON   |  |
|------------------|------------|---------|-------------|------------|----------|----------------------|--|
| ITEM NO.         | NO. IN QTY | SECTION | DESCRIPTION | LENGTH IN. | MATERIAL | CODE NO. OR DWG. NO. |  |

- ## MAST RAISING USING BOOM AS HOLDBACK
- 1) ASSEMBLE DESIRED BOOM LENGTH. USING OUTSIDE ASSIST TO CLOSE BOOM, LIFT UP ON EQUALIZER INSERT (81022604 OR 84034007) AT SLING POSTS AND INSERT LOWER BOOM CONNECTOR PINS. (SEE VIEW L)
  - 2) ATTACH ASSIST CRANE TO EQUALIZER (ITEM 4) UPPER SLING POSTS. LOWER FIXED MAST WHILE PULLING EQUALIZER TOWARDS INSERT 81022604 OR 84034007 WITH ASSIST CRANE. (SEE VIEW L)
  - 3) CONNECT LINKS ON EQUALIZER TO BOOM STRAPS AND LOWER ONTO RAILS ON INSERT 81022604 OR 84034007. EQUALIZER PINS (SEE VIEW N) ARE REQUIRED WHEN CHANGING BOOM LENGTHS WHERE THE EQUALIZER IS NOT SUPPORTED BY AN ASSIST CRANE OR CONNECTED TO THE BOOM STRAPS.
  - 4) RAISE FIXED MAST TO 67° (NORMAL OPERATING ANGLE IS 68°) TO CONNECT COUNTERWEIGHT STRAPS TO LINKS ON VPC-MAX BEAM. (SEE VIEW M)
  - 5) CONNECT COUNTERWEIGHT STRAPS (R16) TO LINKS (R39) ON VPC-MAX BEAM. (SEE VIEW B-B ON SHEET 1)

| ASSEMBLIES<br>USED ON |  |
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|                       |  |

DWG. NO.  
84050187  
SHT 4 OF 4

1. *What is the purpose of this study?*  
 2. *What are the research objectives?*  
 3. *What is the research methodology?*  
 4. *What are the research findings?*  
 5. *What are the conclusions?*

PRIVATE LABELING  
REQUIREMENT TO  
CONFORM TO  
ENGINEERING  
SPECIFICATION  
6829103794 FOR  
COMPONENTS LISTED

CONVERTED FROM CADRA REV-C

|                                                                                                                                                                                                                                                                                                                                     |                                      |       |                     |        |             |                                                                   |              |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|-------|---------------------|--------|-------------|-------------------------------------------------------------------|--------------|
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|                                                                                                                                                                                                                                                                                                                                     | DECIMAL PLACES                       |       | FRACTIONS           |        | <b>.010</b> |                                                                   |              |
|                                                                                                                                                                                                                                                                                                                                     |                                      |       | ± 10 FEET ± 10 FEET |        | DR. R/VH    |                                                                   | MAST RIGGING |
|                                                                                                                                                                                                                                                                                                                                     | (1) PLACE 0.0                        | ± .12 | ± .18               | ± .03  | ± .005      |                                                                   |              |
|                                                                                                                                                                                                                                                                                                                                     | (2) PLACE 0.00                       | ± .06 | ± .12               | ± .015 | ± .005      |                                                                   |              |
|                                                                                                                                                                                                                                                                                                                                     | (3) PLACE 0.000                      | ± .03 | ± .06               | ± .005 | ± .005      |                                                                   |              |
|                                                                                                                                                                                                                                                                                                                                     |                                      |       |                     |        | APP. I/R    |                                                                   |              |
|                                                                                                                                                                                                                                                                                                                                     |                                      |       |                     |        |             | DWG. NO.<br>84050187                                              |              |