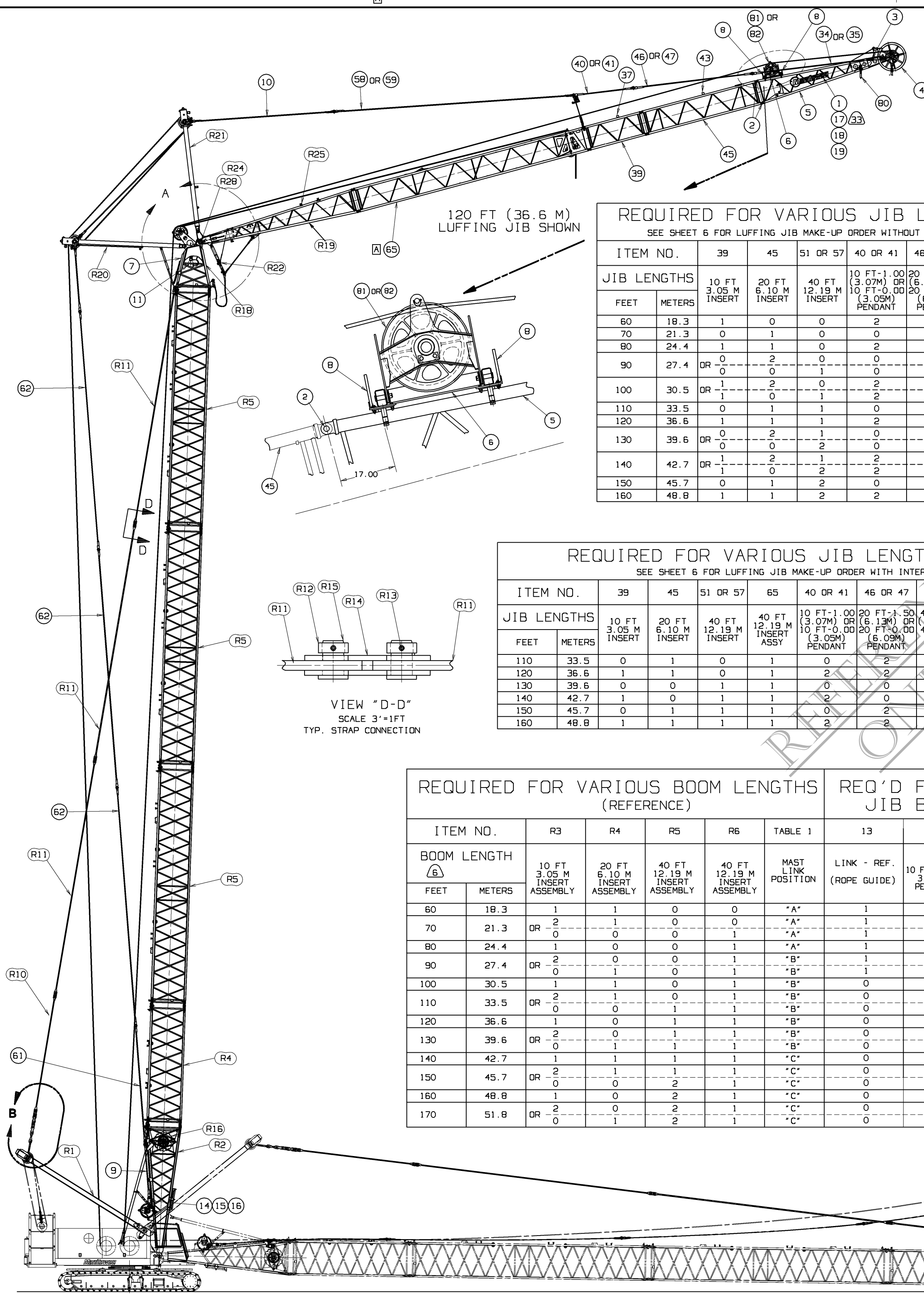




REQUIRED FOR VARIOUS JIB LENGTHS W/O I.F.									
SEE SHEET 6 FOR LUFFING JIB MAKE-UP ORDER WITHOUT INTERMEDIATE FALL									
ITEM NO.	39	45	51 OR 57	40 OR 41	46 OR 47	58 OR 59	37, 43 49 OR 55	2, 36, 42 48 OR 54	
JIB LENGTHS	10 FT 3.05 M INSERT	20 FT 6.10 M INSERT	40 FT 12.19 M INSERT	10 FT-1.00 (3.07M) OR 10 FT-0.00 (3.05M) PENDANT	20 FT-1.50 (6.13M) OR 20 FT-0.00 (6.09M) PENDANT	40 FT-3.00 (12.27M) OR 40 FT-0.00 (12.19M) PENDANT	WIRE ROPE TIMBERS	BOOM JOINT PIN	
60	18.3	1	0	0	2	0	1	4	
70	21.3	0	1	0	0	2	0	1	4
80	24.4	1	1	0	2	2	0	2	8
90	27.4	OR 0	2	0	0	4	0	2	8
100	30.5	OR 1	2	0	2	4	0	3	12
110	33.5	0	1	1	0	2	2	3	8
120	36.6	1	1	1	2	2	2	4	12
130	39.6	OR 0	2	1	0	4	2	4	12
140	42.7	OR 1	2	1	2	4	2	5	16
150	45.7	0	1	2	0	2	4	5	12
160	48.8	1	1	2	2	2	4	6	16

REQUIRED FOR VARIOUS JIB LENGTHS WITH I.F.									
SEE SHEET 6 FOR LUFFING JIB MAKE-UP ORDER WITH INTERMEDIATE FALL									
ITEM NO.	39	45	51 OR 57	65	40 OR 41	46 OR 47	58 OR 59	37, 43 49 OR 55	2, 36, 42 48 OR 54
JIB LENGTHS	10 FT 3.05 M INSERT	20 FT 6.10 M INSERT	40 FT 12.19 M INSERT	40 FT 12.19 M INSERT ASSY	10 FT-1.00 (3.07M) OR 10 FT-0.00 (3.05M) PENDANT	20 FT-1.50 (6.13M) OR 20 FT-0.00 (6.09M) PENDANT	40 FT-3.00 (12.27M) OR 40 FT-0.00 (12.19M) PENDANT	WIRE ROPE TIMBERS	BOOM JOINT PIN
110	33.5	0	1	0	1	2	2	3	8
120	36.6	1	1	0	1	2	2	4	12
130	39.6	0	0	1	1	0	0	4	8
140	42.7	1	0	1	1	2	0	4	5
150	45.7	0	1	1	1	0	2	4	5
160	48.8	1	1	1	1	2	2	4	6

REQUIRED FOR VARIOUS BOOM LENGTHS (REFERENCE)					REQ'D FOR VARIOUS JIB BACKSTAYS				
ITEM NO.	R3	R4	R5	R6	TABLE 1	13	60	61	62
BOOM LENGTH (6)	10 FT 3.05 M INSERT ASSEMBLY	20 FT 6.10 M INSERT ASSEMBLY	40 FT 12.19 M INSERT ASSEMBLY	40 FT 12.19 M INSERT ASSEMBLY	MAST LINK POSITION	LINK - REF. (ROPE GUIDE)	10 FT 0.00 3.05 M PENDANT	20 FT 0.00 6.10 M PENDANT	40 FT 0.00 12.19 M PENDANT
60	18.3	1	1	0	0	"A"	1	2	0
70	21.3	OR 2	1	0	0	"A"	1	4	0
80	24.4	1	0	0	1	"A"	1	2	0
90	27.4	OR 2	0	0	1	"B"	1	4	0
100	30.5	1	1	0	1	"B"	0	2	2
110	33.5	OR 2	1	0	1	"B"	0	2	2
120	36.6	1	0	1	1	"B"	0	0	4
130	39.6	OR 2	0	1	1	"B"	0	4	4
140	42.7	1	1	1	1	"C"	0	2	4
150	45.7	OR 2	1	1	1	"C"	0	4	4
160	48.8	1	0	2	1	"C"	0	2	6
170	51.8	OR 2	0	2	1	"C"	0	4	6

28mm WIRE ROPE ON REAR HOIST DRUM		
631	28mm X 500 FT WIRE ROPE-DYFORM 34XL	A0084015
28mm WIRE ROPE ON REAR HOIST DRUM		
641	28mm X 500 FT WIRE ROPE-6X36 EE1P	A0247916
INSERT 40 FT WITH INTERMEDIATE FALL		
651	40 FT INSERT W INT. FALL ASSEMBLY	A0705928
INTERM. SUSPENSION FOR USE WITH INT. FALL		
662	LINK	A07778
676	PIN	196297
681	LINK ASSEMBLY	A07324
691	BEAM	A07779
702	PENDANT 47"	A0782825
712	PENDANT 18"	A0782926
722	PIN COTTER 1 HOLE W/HEAD	A0733224
732	PIN COTTER 2 HOLE	179959
742	COLLAR	A07451
752	PIN COTTER 1 HOLE W/HEAD	A0733023
76		

OPTIONAL JIB PARTS ASSEMBLY LIST		
801	UNIV. WIRE ROPE ANCHOR JOINT ASSEM.	92046 30
811	W.R.GUIDE SINGLE SHEAVE BRACKET ASSEM	179380
821	W.R.GUIDE DOUBLE SHEAVE BRACKET ASSEM	179381

FOR NOTES SEE SHEET 3

REFERENCE BOOM PARTS LIST		
R1	MAST ASSEMBLY	A00930
R2	BUTT 22 FT ASSEMBLY #84 BOOM	A00810 31
R3	INSERT 10 FT ASSEMBLY #149	A00782 4
R4	INSERT 20 FT ASSEMBLY #149	A00784 5
R5	INSERT 40 FT ASSEMBLY #149	A00786 1
R6	INSERT 40 FT ASSEMBLY #149 W/BKSTY	A00788 1
R7	SPREADER	A01073
R8	LINK	A01074
R9	STRAP 10 FT INSERT	198410
R10	STRAP 20 FT INSERT	196411
R11	STRAP 40 FT INSERT	196412
R12	COLLAR	179862
R13	PIN	179959
R14	LINK	196413
R15	PIN	196416
R16	DRUM SHAFT ASSEMBLY, AUX.	A00620
R17	GUIDE ASSEMBLY	A00968

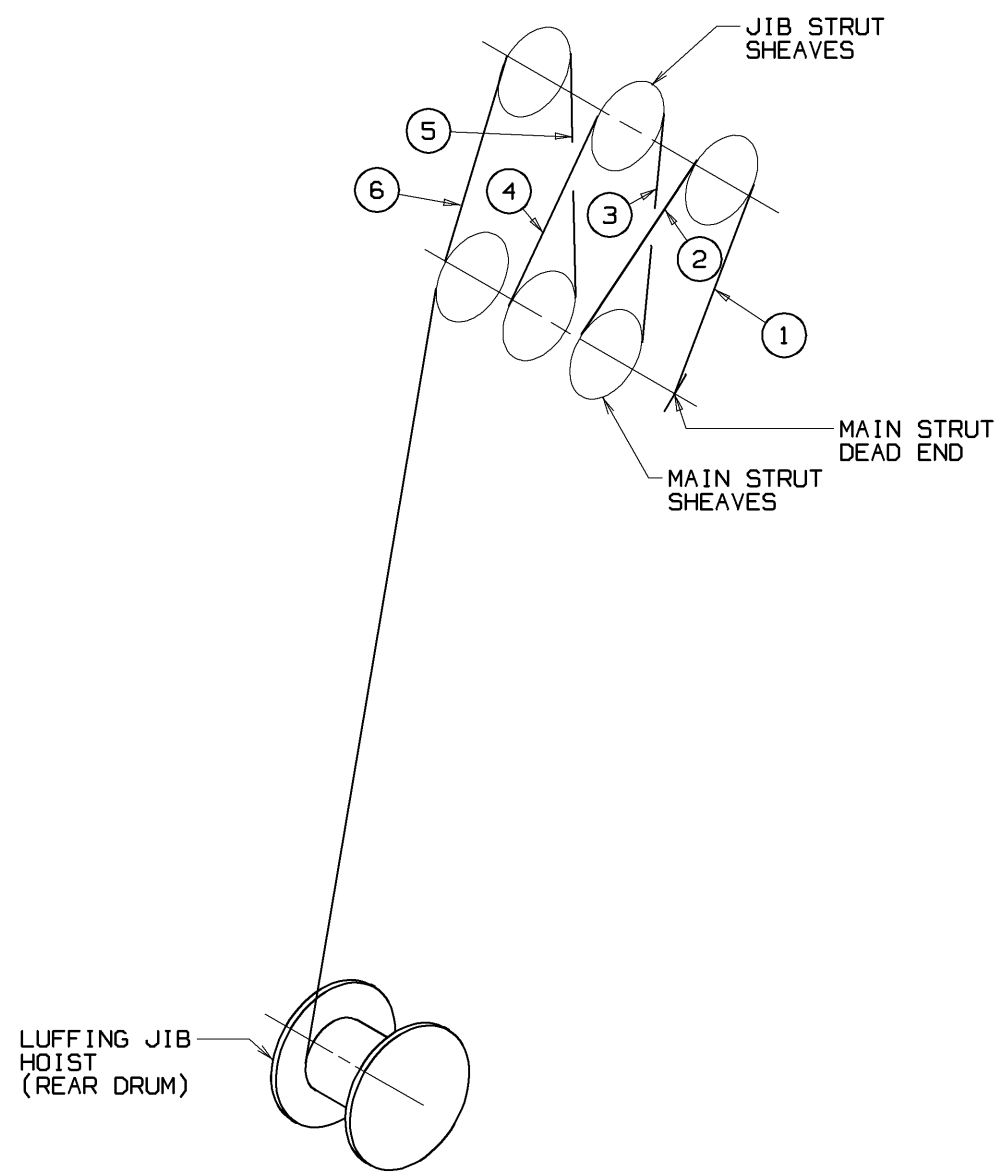
REFERENCE JIB PARTS LIST (21)		
R18	8FT BOOM CAP	A05473
R19	27FT BUTT ASSEMBLY	A05552
R20	MAIN STRUT ASSEMBLY	A0547022
R21	JIB STRUT ASSEMBLY	A0547122
R22	JIB STOP ASSEMBLY	17958517
R23	STRUT STOP ASSEMBLY	A05474
R24	KEEPER PLATE	196810
R25	PIN COTTER 2 HOLE	A06165
R26	PIN COTTER 1 HOLE	A05904
R27	PIN	176155
R28	PIN	177479
R29	PIN SNAP	563823

BOOM SECTION ASSEMBLY	BOOM SECTION WELDMENT (THIS NUMBER APPEARS ON NAMEPLATE)
10FT. INSERT A00782	A00781
20FT. INSERT A00784	A00783
40FT. INSERT A00786(A)	A00785
40FT. INSERT A00788(B)	A00787
BOOM SECTIONS/ASSEMBLIES ABOVE REF. PLACE PRODUCTION BOOM LISTED BELOW	BOOM WELDMENTS/MODIFICATIONS LISTED BELOW ARE ACCEPTABLE FOR WELDMENTS LISTED ABOVE
10FT. INSERT 195493	195492 - A00791
20FT. INSERT 195495	195494 - A00792
40FT. INSERT (A) 195497	195496 - A00793
40FT. INSERT (B) 196403	196402 - A00794
(A) WITHOUT JIB BACKSTAY LUGS	
(B) WITH JIB BACKSTAY LUGS	

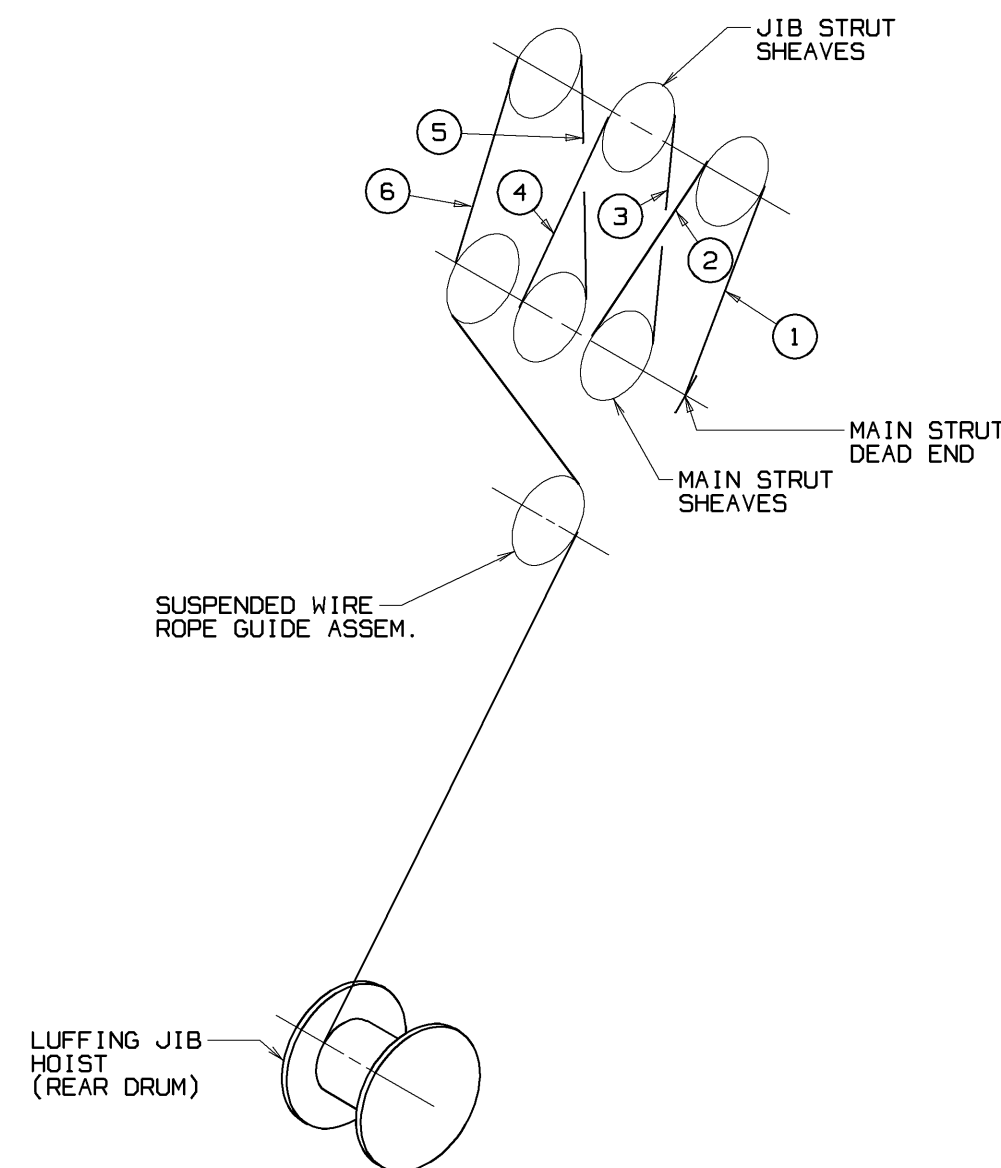
BILL OF MATERIAL					ASSEMBLIES USED ON
ITEM NO. OR POSITION	QTY. ITEM	DESCRIPTION	LENGTH IN	MATERIAL	
BASIC JIB FOR 60 FT. (18.3M)					
(SEE TABLE OF COMPONENTS FOR VARIOUS JIB LENGTHS)					
1	2	SIGN BOOM MANITOWOC 521 X 2026		81012433	REVISIONS 05-06-03 ALL A WAS 65 B WAS 8 7.8" C 01-13-06 TMD D D ADDED DELTA NOTE 06-12-10 JAS E UPDATED JIB SIGN F WAS A02743 G H J ADDED
2	4	BOOM JOINT PIN		70366	
3	2	PIN		13791910	
4	1	JIB POINT ROLLER ASSEMBLY - 2 SHEAVE		177448	
5	1	BOOM TOP (23 FT-0.00)		177560	
6	1	WIRE ROPE GUIDE FRAME ASSEMBLY		179379	
7	1	BOOM CAP ASSEMBLY		A05750	
8	4	BRACKET		19229918	
9	2	PENDANT 8 FT - 11.13 (2.72M)		A07548 9	
10	2	PENDANT 24 FT - 0.00 (7.32M)		277463 8	
11	1	ELECTRICAL ASSEMBLY		A03152	
12	1	JIB ANGLE INDICATOR & AUTO STOP		A07609	
13	1	GUIDE ASSEMBLY SHEAVE LINK FRAME		A07051 29	
14	1	SPREADER		A05920	
15	2	PIN		A05919 27	
16	2	PIN		A06166 27	
17	32	SCREW MB X 30, 4.8 ZINC PLT		7121171301	
18	32	NUT HEX M8-1.25 10 PLN		7661170004	
19	32	WSHR LOCK HIGH COLLAR MB ZC		7951170210	
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
BASIC PENDANT-STOWABLE					
34	2	PENDANT 20 FT - 1.50 (6.13M)		277383 8	
BASIC PENDANT-NON STOWABLE					
35	2	PENDANT 20 FT - 0.00 (6.09M)		276825 8	
INSERT 10 FT (3.05M)					
36	4	BOOM JOINT PIN		70366	
37	1	TIMBER		192022	
38					
39	1	INSERT 10 FT (3.05M)		180136 11	
PENDANT 10 FT-STOWABLE					
JIB PENDANT FOR USE W/10 FT JIB INSERT					
40	2	PENDANT 10 FT - 1.00 (3.07M)		277382 8	
PENDANT 10 FT-NON STOWABLE					
JIB PENDANT FOR USE W/10 FT JIB INSERT					
41	2	PENDANT 10 FT - 0.00 (3.04M)		276823 8	
INSERT 20 FT (6.10M)					
42	4	BOOM JOINT PIN		70366	
43	1	TIMBER		192022	
44					
45	1	INSERT 20 FT (6.10M)		180137 11	
PENDANT 20 FT-STOWABLE					
JIB PENDANT FOR USE W/20 FT JIB INSERT					
46	2	PENDANT 20 FT - 1.50 (6.13M)		277383 8	
PENDANT 20 FT-NON STOWABLE					
JIB PENDANT FOR USE W/20 FT JIB INSERT					
47	2	PENDANT 20 FT - 0.00 (6.09M)		276825 8	
INSERT 40 FT (12.19M) WITHOUT JIB BACKSTAY LUGS					
48	4	BOOM JOINT PIN		70366	
49	2	TIMBER		192022	
50					
51	1	INSERT 40 FT (12.19M)		48208-2 11	
52					
53					
INSERT 40 FT (12.19M) WITH JIB BACKSTAY LUGS					
54	4	BOOM JOINT PIN		70366	
55	2	TIMBER		192022	
56					
57	1	INSERT 40 FT (12.19M)		48208-3 11	
PENDANT 40 FT-STOWABLE					
JIB PENDANT FOR USE W/40 FT JIB INSERT					
58	2	PENDANT 40 FT - 3.00 (12.27M)		277384 8	
PENDANT 40 FT-NON STOWABLE					
JIB PENDANT FOR USE W/40 FT JIB INSERT					
59	2	PENDANT 40 FT - 0.00 (12.19M)		276892 8	
PENDANT 10 FT 0.00 (3.05M)					
JIB BACKSTAY FOR USE W/10 FT BOOM INSERT					
60	2	PENDANT 10 FT - 0.00 (3.05M)		276861 7	
PENDANT 20 FT 0.00 (6.10M)					
JIB BACKSTAY FOR USE W/20 FT BOOM INSERT					
61	2	PENDANT 20 FT - 0.00 (6.10M)		276862 7	
PENDANT 40 FT 0.00 (12.19M)					
JIB BACKSTAY FOR USE W/40 FT BOOM INSERT					
62	2	PENDANT 40 FT - 0.00 (12.19M)		276863 7	

SEE 12 AND 13 170 FT (51.8M)
BOOM SHOWN

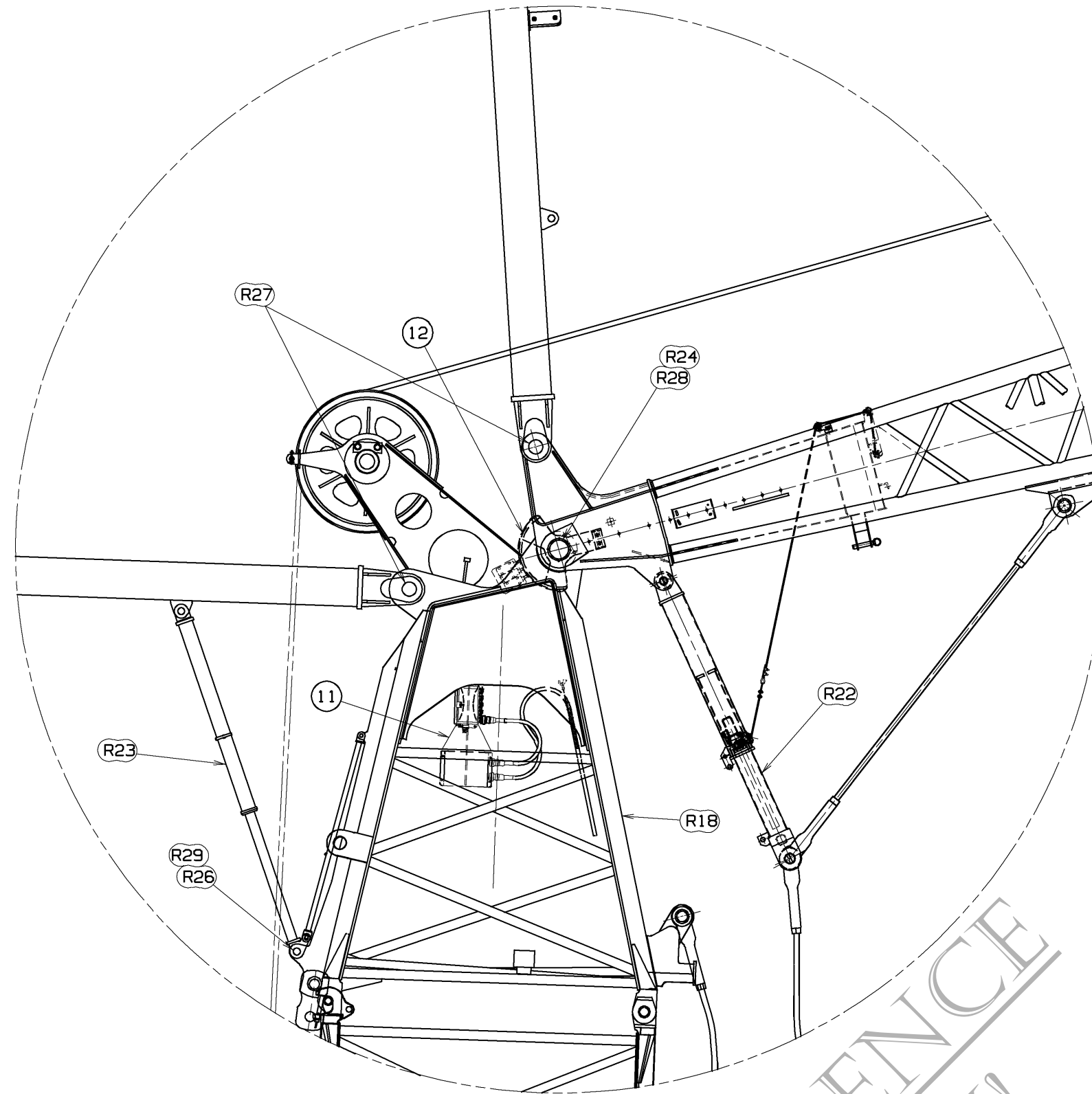
THIS PRINT REMAINS THE PROPERTY OF MANITOWOC CRANES, INC. ALL INFORMATION CONTAINED HEREIN IS CONFIDENTIAL IT IS LOANED, SUBJECT TO RETURN UPON DEMAND, AND ON EXPRESS CONDITION THAT IT IS NOT TO BE COPIED OR USED DIRECTLY OR INDIRECTLY IN ANY MANNER DETRIMENTAL TO OUR INTERESTS.		TOLERANCE UNLESS OTHERWISE SPECIFIED DECIMAL PLACES FABRICATION (1) PLACE 0.0 1.0 FEET 1.0 FEET (2) PLACE 0.00 1.06 1.12 1.015 (3) PLACE 0.000 1.005 1.005 1.005 ANGLES 11.25 11.25 11.25 11.25		SCALE 1"=15'-0"	Manitowoc Cranes, Inc. Manitowoc, Wisconsin	JIB LUFFING ASSEMBLY #84 BOOM/#155 JIB	DATE 03-24-03	PATTERN NO. A05469
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LUFFING JIB HOIST REEVEING
DIAGRAM FOR 6 PART LINE
WITHOUT SUSPENDED GUIDE SHEAVE
(LONG BOOMS ONLY SEE SHEET 1)
SEE 15 AND 16



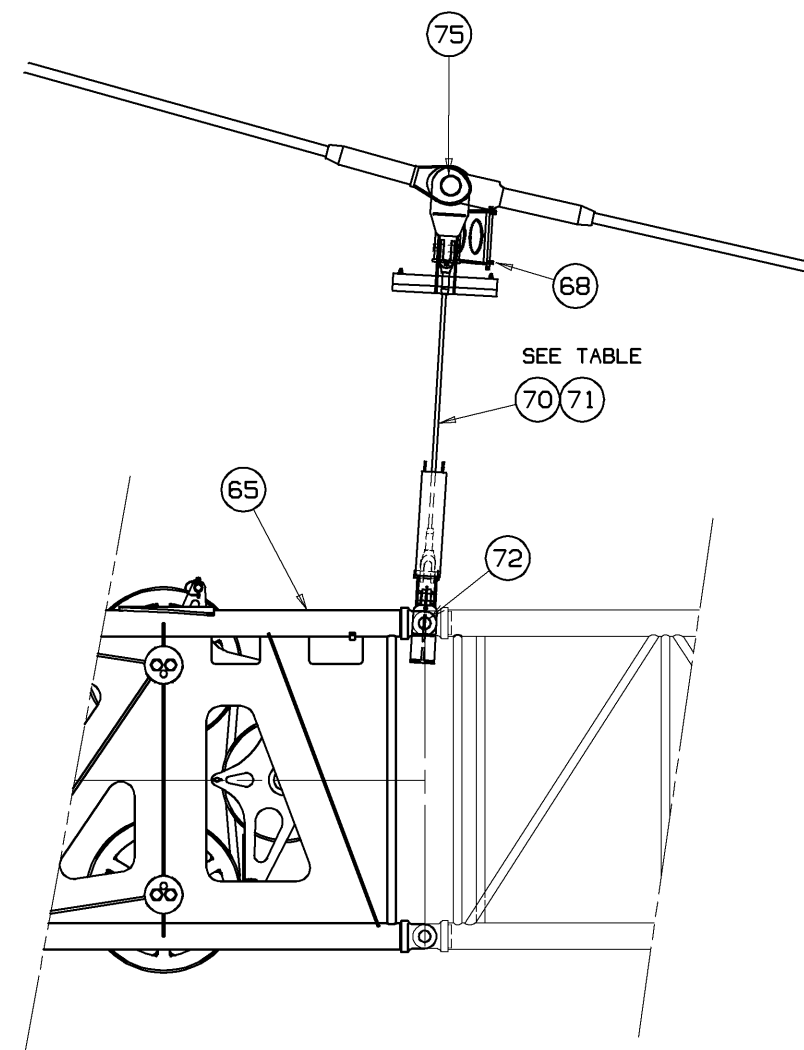
LUFFING JIB HOIST REEVEING
DIAGRAM FOR 6 PART LINE
WITH SUSPENDED GUIDE SHEAVE
(SHORT BOOMS ONLY SEE SHEET 1)
SEE 15 AND 16



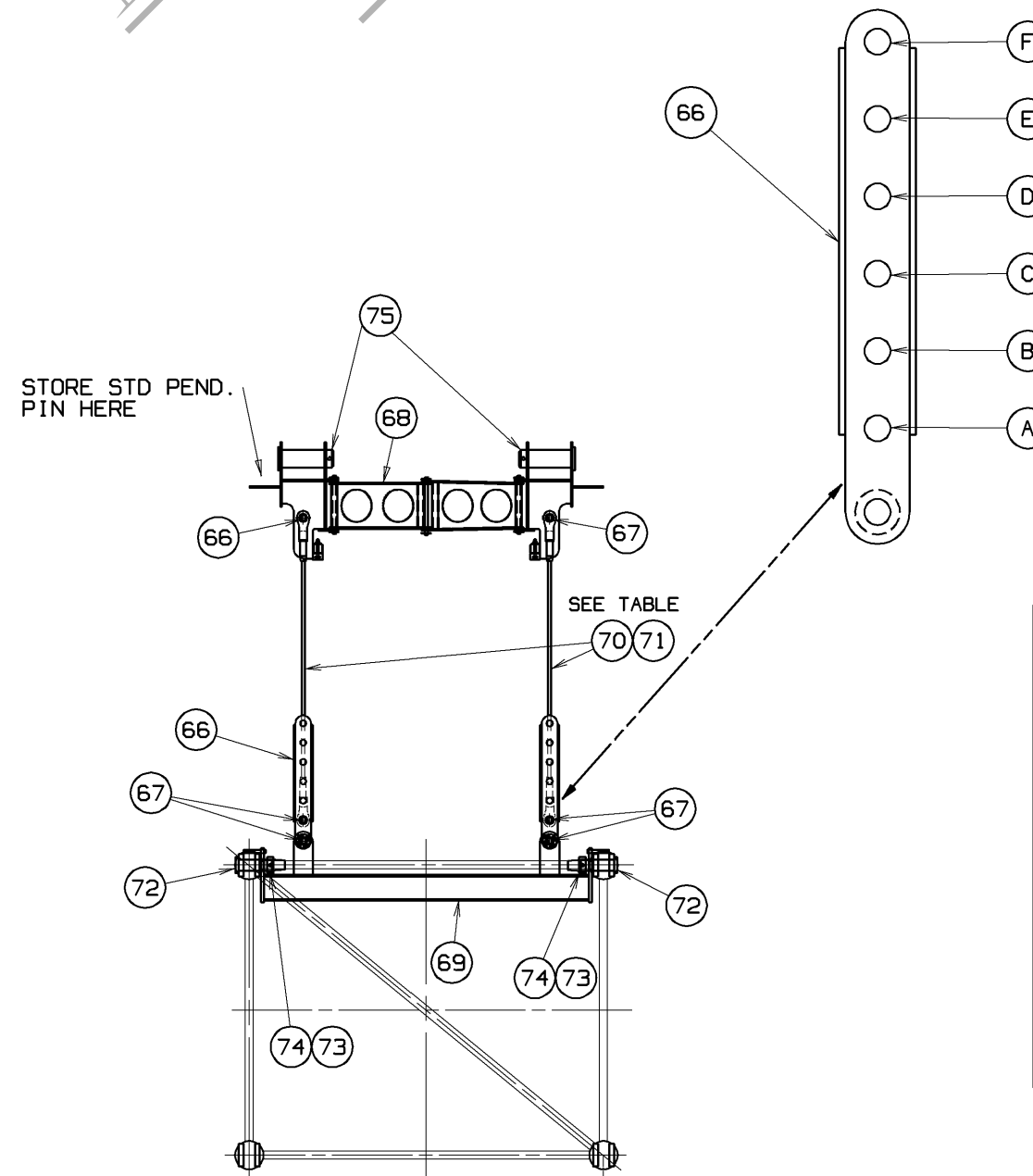
VIEW "A"

SCALE: .75=1FT

REFERENCE ONLY!



INTERMEDIATE SUSPENSION
SCALE .75=1FT



REQ'D FOR JIB LENGTHS				
SEE SHT 6 FOR LJ MAKE-UP ORDER WITH IF				
ITEM NO.	70	71	66	
JIB LENGTHS				
FEET	METERS	PEND. 1 47'	PEND. 2 18'	HOLE POSITION SEE DETAIL
110	33.5	2	0	A
120	36.6	2	0	D
130	39.6	2	2	A
140	42.7	2	2	D
150	45.7	2	2	F
160	48.8	2	4	A

- 1 SEE CHART FOR NO. REQ'D
- 2 MAXIMUM NO. OF 10 FT (3.05 M) INSERTS = 2
- 3 MAXIMUM NO. OF 20 FT (6.10 M) INSERTS = 1
- 4 SEE 1 AND 2
- 5 SEE 1 AND 3
- 6 STARTING WITH THE BOOM BUTT, INSERTS AND PENDANTS MUST BE INSTALLED IN ORDER OF ASCENDING LENGTH.
- 7 DWG. 76280
- 8 DWG. A03150 SEE 14
- 9 DWG. A07553
- 10 INSTALL WITH HEAD OF PIN TO THE INSIDE.
- 11 STARTING WITH THE JIB BUTT, INSERTS AND PENDANTS MUST BE INSTALLED IN ORDER OF ASCENDING LENGTH. SEE SHEET 6.
- 12 REFER TO SPECIFIC CAPACITY CHART FOR APPROPRIATE BOOM AND JIB COMBINATIONS.
- 13 REFER TO LUFFING JIB RAISING PROCEDURE FOR RAISING AND LOWERING BOOM AND JIB.
- 14 DO NOT MIX PENDANTS OF DIFFERENT LENGTHS. PENDANTS MUST BE INSTALLED IN MATCHED SETS (PENDANTS ON ONE SIDE OF JIB MUST MATCH LENGTH OF PENDANTS ON OTHER SIDE OF JIB) FAILING TO OBSERVE THIS PRECAUTION WILL CAUSE JIB TO TWIST EXCESSIVELY STRUCTURAL DAMAGE TO JIB WILL OCCUR.
- 15 WIRE ROPE - 28mm X 500FT. 6X36 EXTRA EXTRA IMPROVED PLOW STEEL, NON-ROTATION RESISTANT. RIGHT HAND REGULAR LAY IWRC MIN. BREAKING STRENGTH 135,600 LBS.
- 16 WIRE ROPE - 28mm X 500FT. DYFORM 34XL ROTATION RESISTANT. RIGHT HAND LANG LAY MIN. BREAKING STRENGTH 168,800 LBS.
- 17 SEE JIB STOP ASSY DRAWING FOR INSTALLATION.
- 18 REMOVE CAPSCREWS FROM ITEM 6 AND REPLACE WITH 2.00 INCH CAPSCREWS. APPLY LOCTITE #271 TO THREADS (MCC CODE NO. 622292) TORQUE CAPSCREWS (ITEM 8) TO 53 FT. LBS.
- 19 FOR INTERMEDIATE SUSPENSION SEE SHEET 3 AND 6
- 20 FOR WELDMENT DRAWING SEE A05476
- 21 ON TRANSPORT PACKAGE DWG A05750
- 22 20 AND 21
- 23 USE COTTER PIN 562172.
- 24 REPLACES BOOM JOINT PIN 70366 WHEN INTERMEDIATE SUSPENSION IS USED.
- 25 ON DRAWING A06395
- 26 ON DRAWING A02427
- 27 REQUIRES COTTER PIN 562152
- A 28 INSERT 40FT ASSEMBLY (ITEM 65) MUST BE ATTACHED TO JIB BUTT. STARTING WITH ITEM 65, PENDANTS AND INSERTS MUST BE ASSEMBLED IN ORDER OF INCREASING LENGTH. THE SHORTER INSERTS AND PENDANTS MUST BE CLOSEST TO ITEM 65. SEE SHEET 6.
- 29 REQUIRED FOR USE WITH 60' - 90' BOOM LENGTHS
- 30 WHEN WIRELESS LOAD SENSING IS USED REMOVE ITEMS 5, 6, & 7 FROM ASSY 092046 AND REPLACE WITH LINK A05174 AND PIN 171214 USE REMAINING LINK, SENSOR, & WEDGE SOCKET FROM JIB POINT ASSY
- B 31 IF BOOM BUTT WAS MANUFACTURED BEFORE 5-6-03 MODIFICATION A08242 MUST BE USED WITH THIS LUFFING JIB
- C 32 960 FT. OF WIRE ROPE PERMISSABLE IN LUFFING JIB OPERATION.
- D 33 EACH ITEM 1 REQUIRES A MINIMUM OF 10 SETS OF ITEMS 17, 18 & 19.

BILL OF MATERIAL		ASSEMBLIES USED ON
ITEM NO.	DESCRIPTION	QTY
1	SEE CHART FOR NO. REQ'D	
2	MAXIMUM NO. OF 10 FT (3.05 M) INSERTS = 2	
3	MAXIMUM NO. OF 20 FT (6.10 M) INSERTS = 1	
4	SEE 1 AND 2	
5	SEE 1 AND 3	
6	STARTING WITH THE BOOM BUTT, INSERTS AND PENDANTS MUST BE INSTALLED IN ORDER OF ASCENDING LENGTH.	
7	DWG. 76280	
8	DWG. A03150 SEE 14	
9	DWG. A07553	
10	INSTALL WITH HEAD OF PIN TO THE INSIDE.	
11	STARTING WITH THE JIB BUTT, INSERTS AND PENDANTS MUST BE INSTALLED IN ORDER OF ASCENDING LENGTH. SEE SHEET 6.	
12	REFER TO SPECIFIC CAPACITY CHART FOR APPROPRIATE BOOM AND JIB COMBINATIONS.	
13	REFER TO LUFFING JIB RAISING PROCEDURE FOR RAISING AND LOWERING BOOM AND JIB.	
14	DO NOT MIX PENDANTS OF DIFFERENT LENGTHS. PENDANTS MUST BE INSTALLED IN MATCHED SETS (PENDANTS ON ONE SIDE OF JIB MUST MATCH LENGTH OF PENDANTS ON OTHER SIDE OF JIB) FAILING TO OBSERVE THIS PRECAUTION WILL CAUSE JIB TO TWIST EXCESSIVELY STRUCTURAL DAMAGE TO JIB WILL OCCUR.	
15	WIRE ROPE - 28mm X 500FT. 6X36 EXTRA EXTRA IMPROVED PLOW STEEL, NON-ROTATION RESISTANT. RIGHT HAND REGULAR LAY IWRC MIN. BREAKING STRENGTH 135,600 LBS.	
16	WIRE ROPE - 28mm X 500FT. DYFORM 34XL ROTATION RESISTANT. RIGHT HAND LANG LAY MIN. BREAKING STRENGTH 168,800 LBS.	
17	SEE JIB STOP ASSY DRAWING FOR INSTALLATION.	
18	REMOVE CAPSCREWS FROM ITEM 6 AND REPLACE WITH 2.00 INCH CAPSCREWS. APPLY LOCTITE #271 TO THREADS (MCC CODE NO. 622292) TORQUE CAPSCREWS (ITEM 8) TO 53 FT. LBS.	
19	FOR INTERMEDIATE SUSPENSION SEE SHEET 3 AND 6	
20	FOR WELDMENT DRAWING SEE A05476	
21	ON TRANSPORT PACKAGE DWG A05750	
22	20 AND 21	
23	USE COTTER PIN 562172.	
24	REPLACES BOOM JOINT PIN 70366 WHEN INTERMEDIATE SUSPENSION IS USED.	
25	ON DRAWING A06395	
26	ON DRAWING A02427	
27	REQUIRES COTTER PIN 562152	
A 28	INSERT 40FT ASSEMBLY (ITEM 65) MUST BE ATTACHED TO JIB BUTT. STARTING WITH ITEM 65, PENDANTS AND INSERTS MUST BE ASSEMBLED IN ORDER OF INCREASING LENGTH. THE SHORTER INSERTS AND PENDANTS MUST BE CLOSEST TO ITEM 65. SEE SHEET 6.	
29	REQUIRED FOR USE WITH 60' - 90' BOOM LENGTHS	
30	WHEN WIRELESS LOAD SENSING IS USED REMOVE ITEMS 5, 6, & 7 FROM ASSY 092046 AND REPLACE WITH LINK A05174 AND PIN 171214 USE REMAINING LINK, SENSOR, & WEDGE SOCKET FROM JIB POINT ASSY	
B 31	IF BOOM BUTT WAS MANUFACTURED BEFORE 5-6-03 MODIFICATION A08242 MUST BE USED WITH THIS LUFFING JIB	
C 32	960 FT. OF WIRE ROPE PERMISSABLE IN LUFFING JIB OPERATION.	
D 33	EACH ITEM 1 REQUIRES A MINIMUM OF 10 SETS OF ITEMS 17, 18 & 19.	

5-06-03 ALL CORRECTED ITEM NUMBER 8 ADDED NOTE 31 01-13-06 TWO 01 ADDED NOTE 08-12-10 JIBS 01 ADDED NOTE

DRG. NO. A05469

SHT 3 OF 6

PRIVATE LABELING REQUIREMENT TO CONFORM TO ENGINEERING SPECIFICATION 6829103794 FOR COMPONENTS LISTED IN 035200-09-026

DATE 03-24-03

PATTERN NO.

MANITOWOC CRANES, INC. JIB LUFFING ASSEMBLY

MANITOWOC, WISCONSIN #84 BOOM/#155 JIB

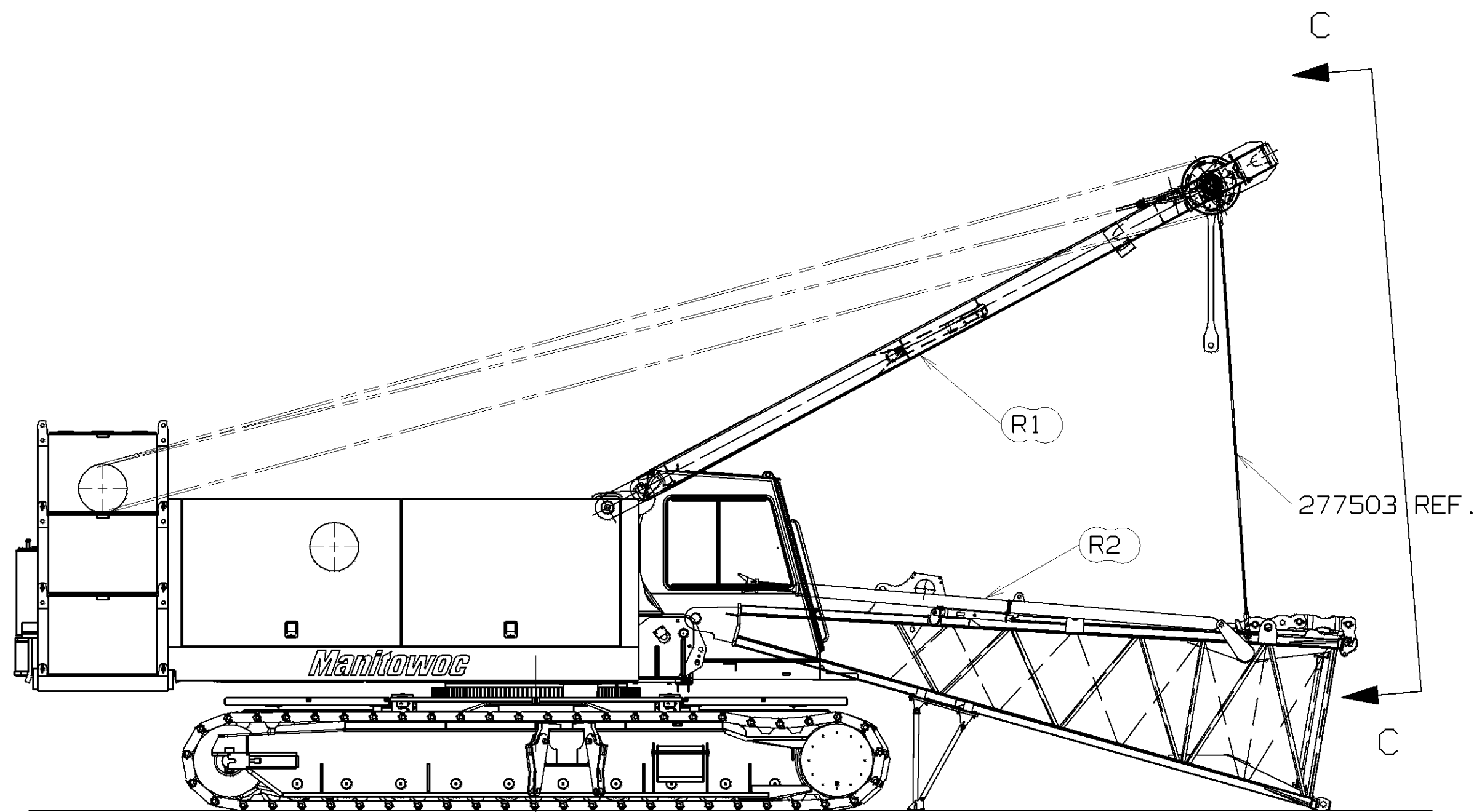
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APP TSC

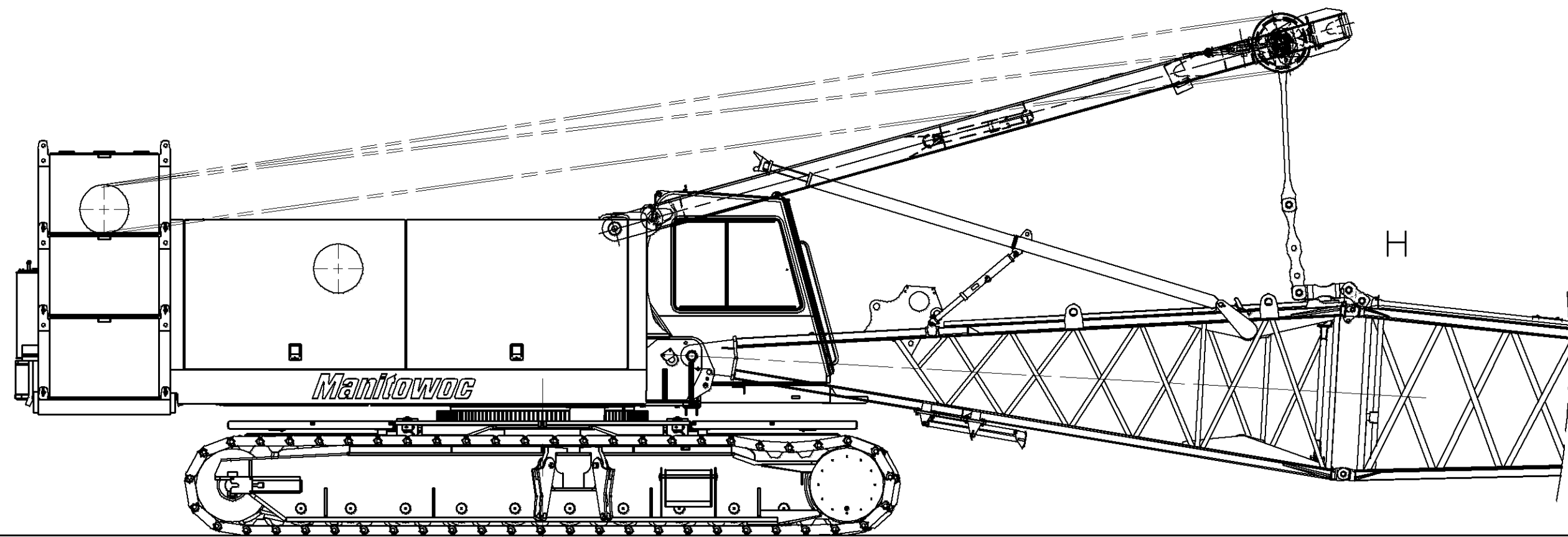
DRG. NO. A05469

SHT 3 OF 6

BILL OF MATERIAL					ASSEMBLIES USED ON
ITEM NO.	QTY.	DESCRIPTION	LENGTH	MATERIAL	

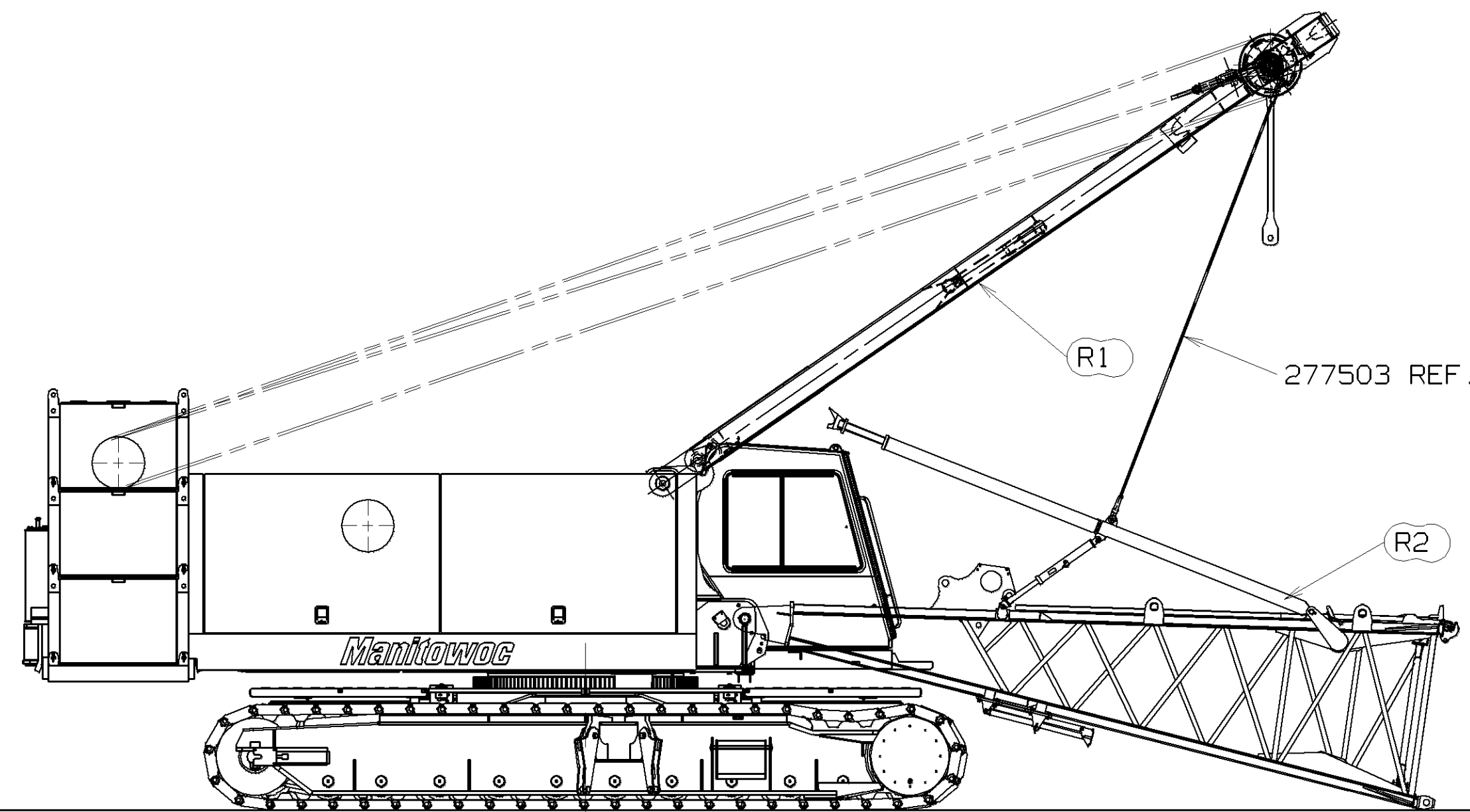


ATTACHING BOOM BUTT TO ROTATING BED
USING OPTIONAL BUTT SUPPORT ASSEMBLY

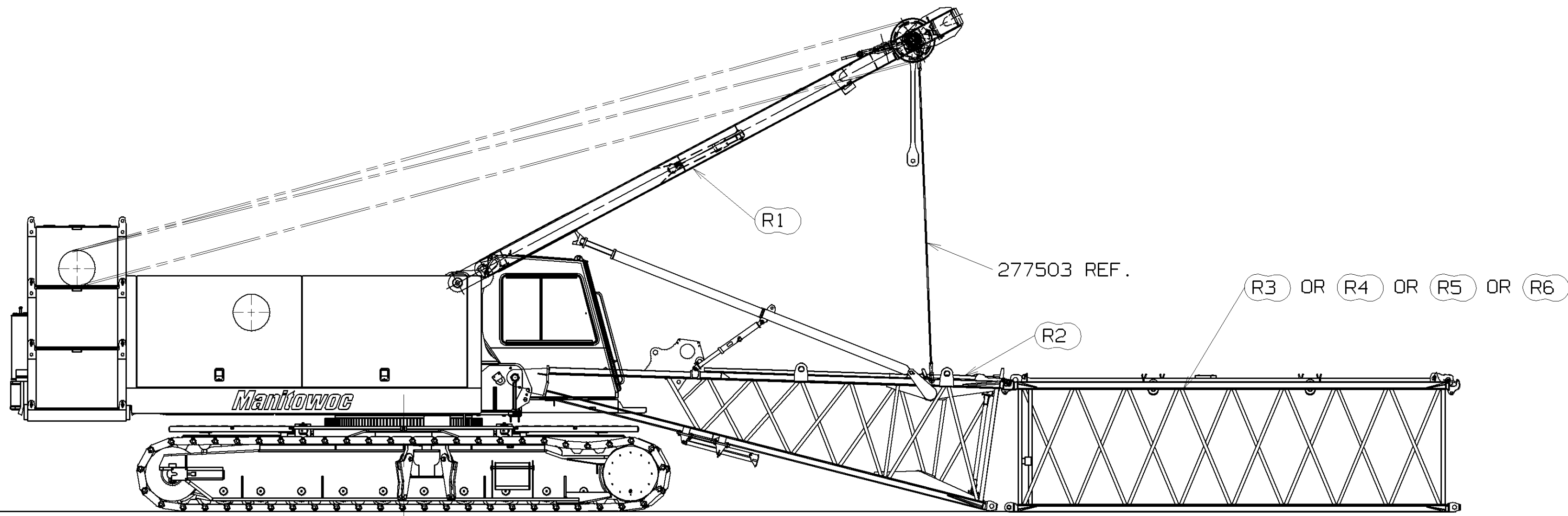


CONNECTING OR DISCONNECTING
MAST/SPREADER/INSERT STRAPS

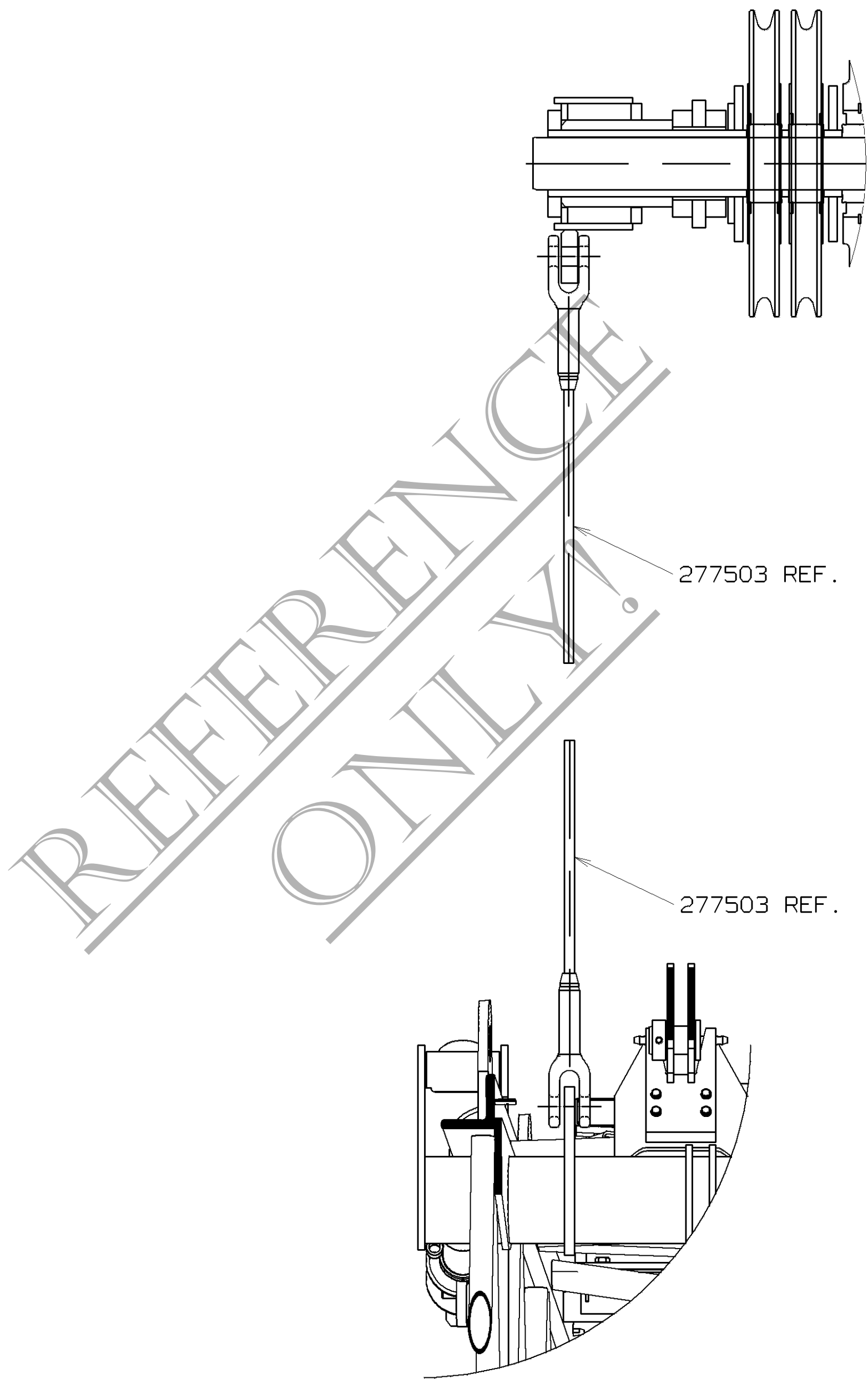
- BOOM ASSEMBLY PROCEDURE
(MAST CAN BE USED TO ASSEMBLE ALL RIGGING COMPONENTS.)
1. ASSEMBLE BOOM COMPLETE. WITHOUT BUTT.
 2. ATTACH STRAPS, LINKS AND PINS AS REQ'D.
 3. RAISE WIRE ROPE GUIDE OF BOOM TOP.
 4. ATTACH BOOM HANDLING PENDANT TO MAST LUGS. SEE APPROPRIATE VIEWS AT LEFT.
 5. INSTALL BOOM BUTT USING THE OPTIONAL BUTT SUPPORT ASSEMBLY.
 6. ATTACH BOOM HANDLING PENDANTS AT LOWER END TO BOOM STOP RAISING LUGS. RAISE AND PIN BOOM STOPS IN WORKING POSITION.
 7. ATTACH BOOM HANDLING PENDANT LOWER END BACK TO BOOM BUTT. BOOM UP TO CLEAR GROUND WITH BUTT.
 8. POSITION MACHINE TO ALIGN UPPER FACT CONNECTORS (HOOK) ON BOOM BUTT WITH UPPER FACT CONNECTORS OF FIRST BOOM INSERT AND INSERT LOCKING PINS.
 9. SLOWLY BOOM UP TO ALIGN LOWER PIN CONNECTOR HOLES ON BOOM BUTT WITH LOWER PIN CONNECTOR HOLES OF FIRST BOOM INSERT AND INSERT PINS.
- WARNING:
DO NOT BOOM UP PAST LOWER CONNECTOR HOLES. IF BOOMING UP CONTINUES AFTER CONNECTORS BOTTOM OUT OR AFTER PINS ARE INSERTED, DAMAGE TO BOOM HANDLING PENDANTS AND BOOM BUTT WILL OCCUR.
10. BOOM DOWN TO DISCONNECT BOOM HANDLING PENDANT FROM MAST AND STOW ON BUTT.
 11. ATTACH SPREADER LINKS TO STRAPS OF FIRST INSERT. SEE VIEW H
 12. ATTACH MAST LINK TO ADJUSTABLE LINK ON BOOM BUTT. USED APPROPRIATE HOLE ACCORDING TABLE 1 (A, B OR C).
 13. BOOM UP TO DESIRED BOOM ANGLE.



USING MAST PENDANT TO POSITION BOOM STOP
IN WORKING POSITION

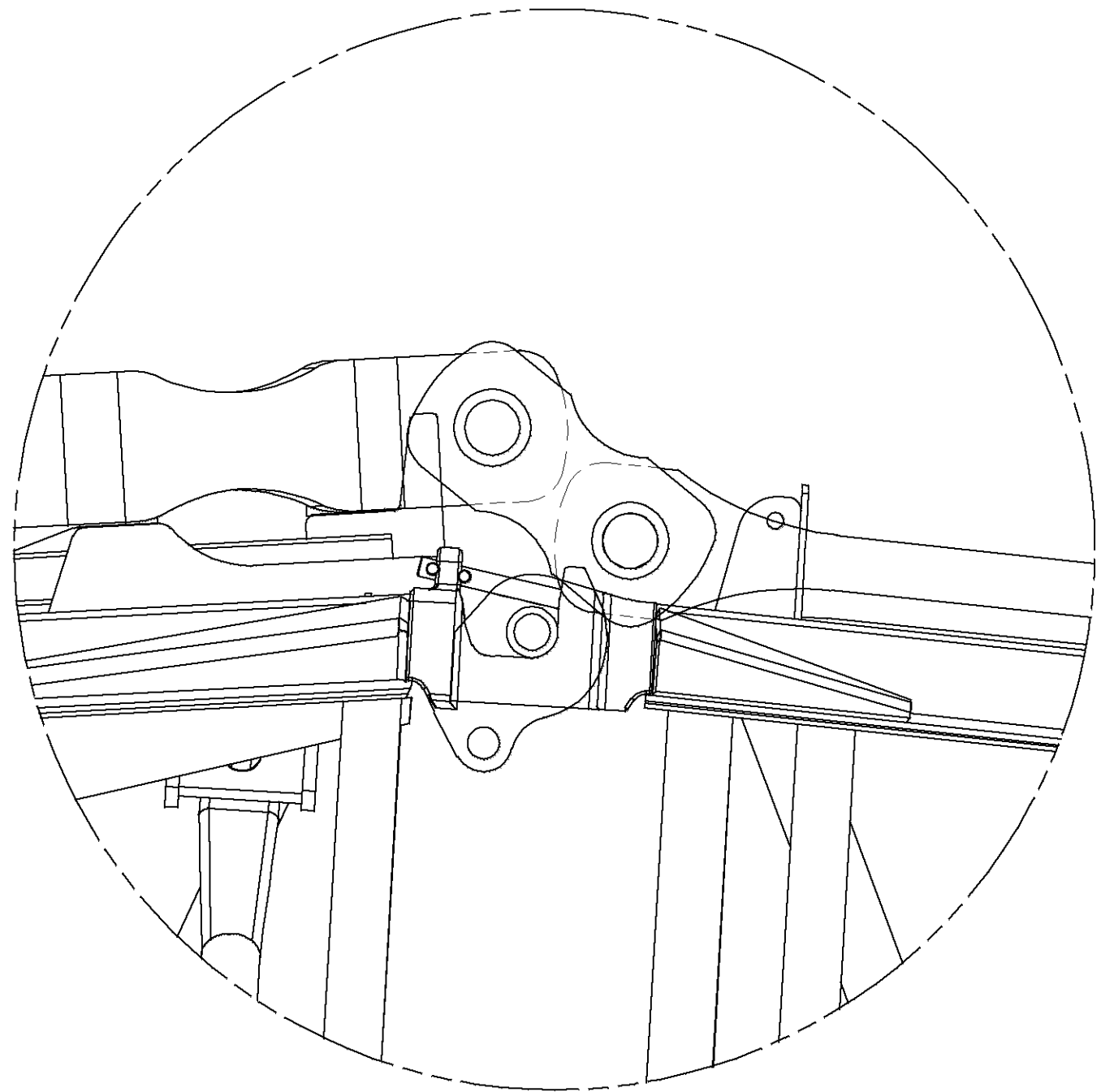


BOOM ASSEMBLY WITH MAST

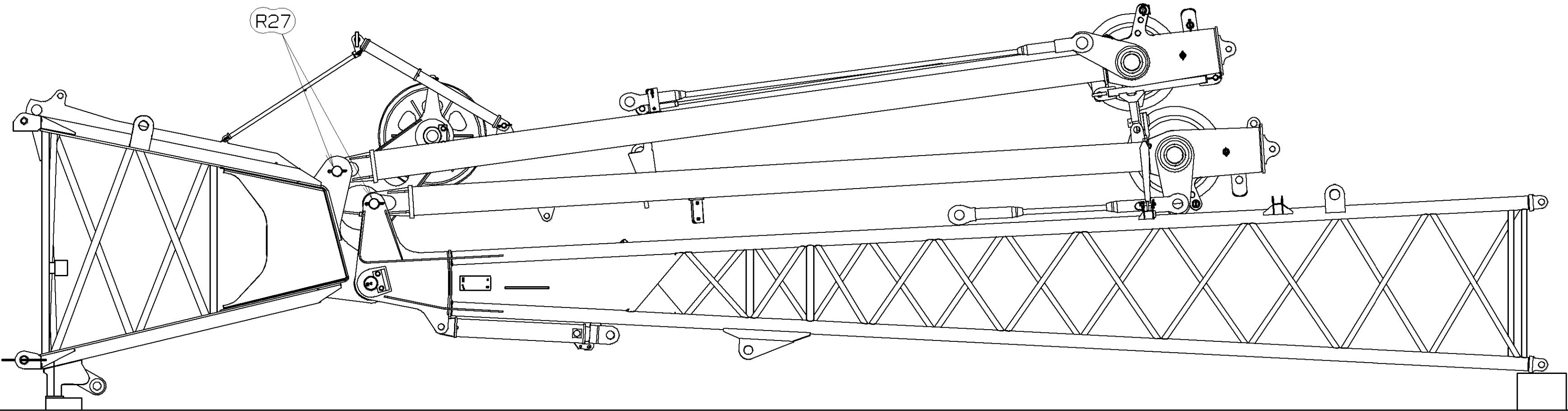


- TO DISASSEMBLE BOOM
1. BOOM DOWN AND SUPPORT BOOM ON BLOCKING.
 2. DISCONNECT SPREADER FROM INSERT STRAPS.
 3. DISCONNECT MAST LINK FROM ADJUSTABLE LINKS.
 4. CONNECT BOOM HANDLING PENDANTS TO MAST.
 5. BOOM UP TO REMOVE SLACK FROM BOOM HANDLING STRAPS.
- WARNING:
DO NOT BOOM UP TO PUT TENSION INTO BOOM HANDLING PENDANTS. (REMOVE SLACK ONLY) TENSION IN BOOM HANDLING PENDANT WILL DAMAGE PENDANT AND BOOM BUTT.
6. REMOVE BOOM BUTT TO INSERTS PINS AND BOOM DOWN TO DISENGAGE UPPER BOOM FACT CONNECTORS.
- WARNING:
BOOM MUST BE PROPERLY BLOCKED TO PREVENT SHIFTING DURING PIN REMOVAL.
7. SLOWLY BACK AWAY FROM BOOM
 8. LOWER BOOM STOPS TO SHIPPING POSITION.
 9. REMOVE BOOM BUTT FROM ROTATING BED AND STOW BOOM HANDLING PENDANTS.
 10. DISASSEMBLE BOOM WITH MAST

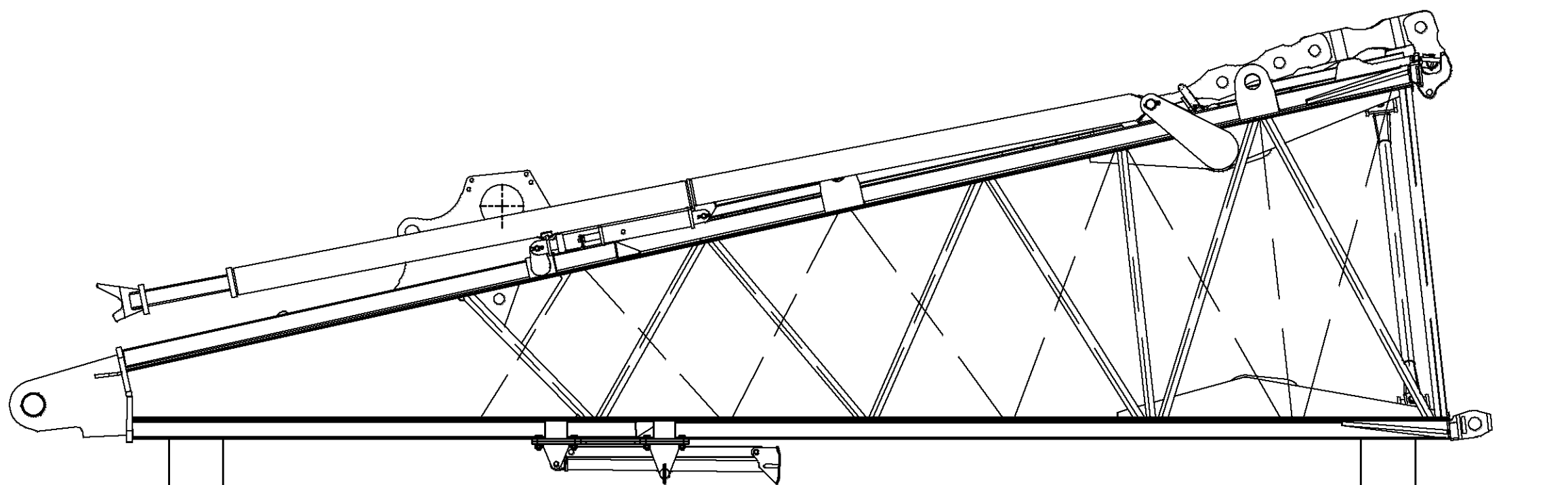
VIEW "C" - "C"
SCALE 1:50=1FT.



SCALE 2=1FT
VIEW H



BOOM TOP SHIPPING ARRANGEMENT



BOOM BUTT SHIPPING ARRANGEMENT

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DECIMAL PLACES	FABRICATION	MACHINING	DR. ER	DR. ER	DR. ER	DR. ER	DR. ER	DR. ER	DR. ER
(1) PLACE 0.0	± .10 FEET > 10 FEET	± .015	OK TSC	OK TSC	OK TSC	OK TSC	OK TSC	OK TSC	OK TSC
(2) PLACE 0.00	± .06	± .012	OK TSC	OK TSC	OK TSC	OK TSC	OK TSC	OK TSC	OK TSC
(3) PLACE 0.000	± .006	± .005	OK TSC	OK TSC	OK TSC	OK TSC	OK TSC	OK TSC	OK TSC
ANGLES	1°-30'	10°-30'	OK TSC	OK TSC	OK TSC	OK TSC	OK TSC	OK TSC	OK TSC

