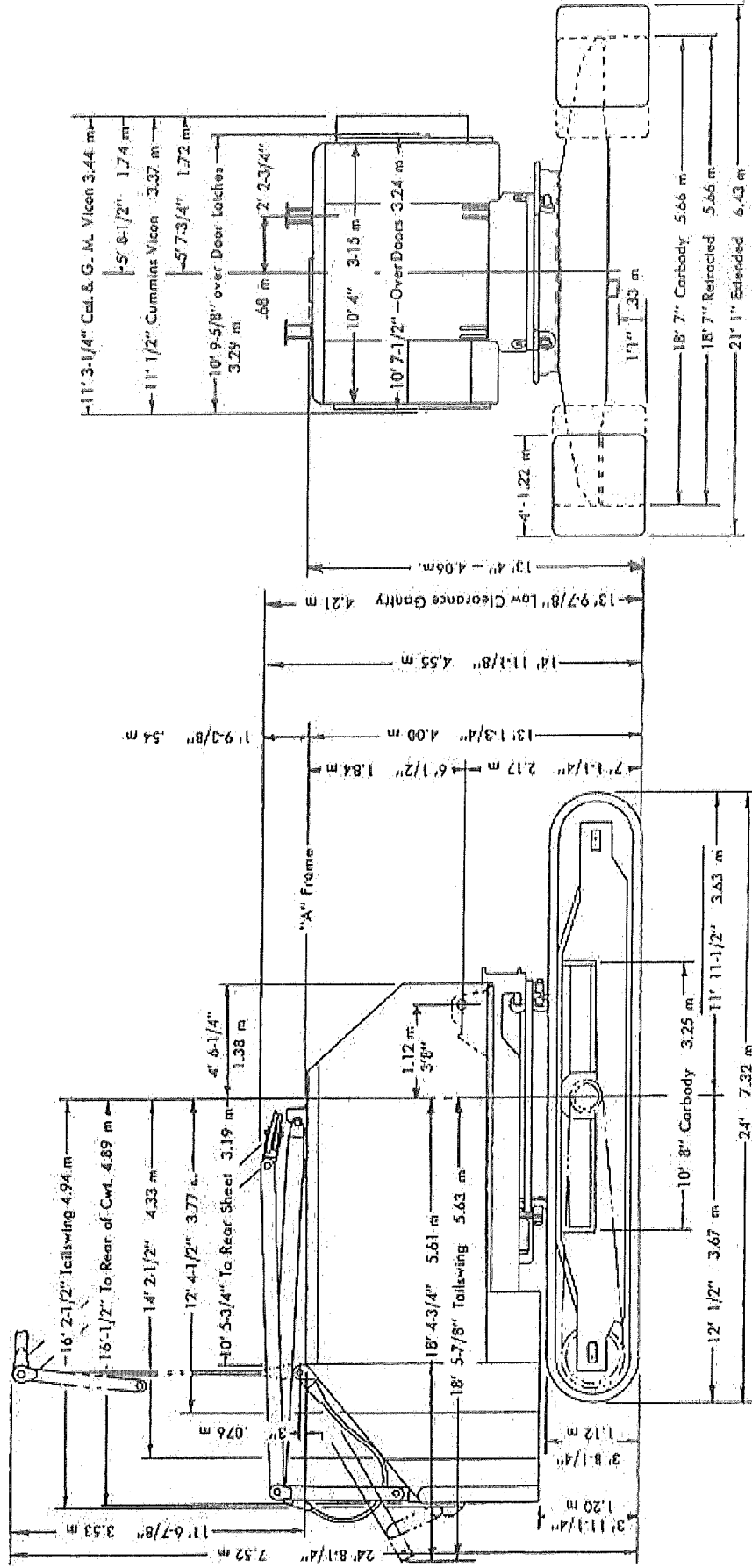


MANITOWOC ENGINEERING CO.

A Division of The Manitowoc Company, Inc.

Manitowoc, Wisconsin



3-21-55
 2-27-57
 7-1-64
 Drawg. Data 11-28-63

**MANITOWOC 400W - 24° CRAWLERS EXTENDED
LIFT CRANE CAPACITIES - 104,400# CRT.
BOOM #17 WITH OPEN THRUAT TOP
CRAWLER MACHINE ON BARGE - G DEGREE MACHINE LIST**

RAD. FT.	CAPACITIES IN THOUSANDS OF LBS.												RAD. FT.		
	60	70	80	90	100	110	120	130	140	150	160	170		180	190
1-0	290.0	267.1	247.5	230.0	214.0	199.0	185.0	172.0	160.0	149.0	139.0	129.0	120.0	111.0	103.0
1-5	285.0	262.1	242.5	225.0	209.0	194.0	180.0	167.0	155.0	144.0	134.0	124.0	115.0	106.0	98.0
2-0	280.0	257.1	237.5	220.0	204.0	189.0	175.0	162.0	150.0	139.0	129.0	119.0	110.0	101.0	93.0
2-5	275.0	252.1	232.5	215.0	199.0	184.0	170.0	157.0	145.0	134.0	124.0	114.0	105.0	96.0	88.0
3-0	270.0	247.1	227.5	210.0	194.0	179.0	165.0	152.0	140.0	129.0	119.0	109.0	100.0	91.0	83.0
3-5	265.0	242.1	222.5	205.0	189.0	174.0	160.0	147.0	135.0	124.0	114.0	104.0	95.0	86.0	78.0
4-0	260.0	237.1	217.5	200.0	184.0	169.0	155.0	142.0	130.0	119.0	109.0	99.0	90.0	81.0	73.0
4-5	255.0	232.1	212.5	195.0	179.0	164.0	150.0	137.0	125.0	114.0	104.0	94.0	85.0	76.0	68.0
5-0	250.0	227.1	207.5	190.0	174.0	159.0	145.0	132.0	120.0	109.0	99.0	89.0	80.0	71.0	63.0
5-5	245.0	222.1	202.5	185.0	169.0	154.0	140.0	127.0	115.0	104.0	94.0	84.0	75.0	66.0	58.0
6-0	240.0	217.1	197.5	180.0	164.0	149.0	135.0	122.0	110.0	99.0	89.0	79.0	70.0	61.0	53.0
6-5	235.0	212.1	192.5	175.0	159.0	144.0	130.0	117.0	105.0	94.0	84.0	74.0	65.0	56.0	48.0
7-0	230.0	207.1	187.5	170.0	154.0	139.0	125.0	112.0	100.0	89.0	79.0	69.0	60.0	51.0	43.0
7-5	225.0	202.1	182.5	165.0	149.0	134.0	120.0	107.0	95.0	84.0	74.0	64.0	55.0	46.0	38.0
8-0	220.0	197.1	177.5	160.0	144.0	129.0	115.0	102.0	90.0	79.0	69.0	59.0	50.0	41.0	33.0
8-5	215.0	192.1	172.5	155.0	139.0	124.0	110.0	97.0	85.0	74.0	64.0	54.0	45.0	36.0	28.0
9-0	210.0	187.1	167.5	150.0	134.0	119.0	105.0	92.0	80.0	69.0	59.0	49.0	40.0	31.0	23.0
9-5	205.0	182.1	162.5	145.0	129.0	114.0	100.0	87.0	75.0	64.0	54.0	44.0	35.0	26.0	18.0
10-0	200.0	177.1	157.5	140.0	124.0	109.0	95.0	82.0	70.0	59.0	49.0	39.0	30.0	21.0	13.0
10-5	195.0	172.1	152.5	135.0	119.0	104.0	90.0	77.0	65.0	54.0	44.0	34.0	25.0	16.0	8.0
11-0	190.0	167.1	147.5	130.0	114.0	99.0	85.0	72.0	60.0	49.0	39.0	29.0	20.0	11.0	3.0
11-5	185.0	162.1	142.5	125.0	109.0	94.0	80.0	67.0	55.0	44.0	34.0	24.0	15.0	6.0	-
12-0	180.0	157.1	137.5	120.0	104.0	89.0	75.0	62.0	50.0	39.0	29.0	19.0	10.0	1.0	-
12-5	175.0	152.1	132.5	115.0	99.0	84.0	70.0	57.0	45.0	34.0	24.0	14.0	5.0	-	-
13-0	170.0	147.1	127.5	110.0	94.0	79.0	65.0	52.0	40.0	29.0	19.0	9.0	4.0	-	-
13-5	165.0	142.1	122.5	105.0	89.0	74.0	60.0	47.0	35.0	24.0	14.0	8.0	3.0	-	-
14-0	160.0	137.1	117.5	100.0	84.0	69.0	55.0	42.0	30.0	19.0	9.0	7.0	2.0	-	-
14-5	155.0	132.1	112.5	95.0	79.0	64.0	50.0	37.0	25.0	14.0	8.0	6.0	1.0	-	-
15-0	150.0	127.1	107.5	90.0	74.0	59.0	45.0	32.0	20.0	9.0	7.0	5.0	0.0	-	-
15-5	145.0	122.1	102.5	85.0	69.0	54.0	40.0	27.0	15.0	8.0	6.0	4.0	0.0	-	-
16-0	140.0	117.1	97.5	80.0	64.0	49.0	35.0	22.0	10.0	7.0	5.0	3.0	0.0	-	-
16-5	135.0	112.1	92.5	75.0	59.0	44.0	30.0	17.0	8.0	6.0	4.0	2.0	0.0	-	-
17-0	130.0	107.1	87.5	70.0	54.0	39.0	25.0	14.0	7.0	5.0	3.0	1.0	0.0	-	-
17-5	125.0	102.1	82.5	65.0	49.0	34.0	20.0	11.0	6.0	4.0	2.0	1.0	0.0	-	-
18-0	120.0	97.1	77.5	60.0	44.0	29.0	15.0	8.0	5.0	3.0	1.0	0.0	0.0	-	-
18-5	115.0	92.1	72.5	55.0	39.0	24.0	10.0	6.0	4.0	2.0	1.0	0.0	0.0	-	-
19-0	110.0	87.1	67.5	50.0	34.0	19.0	7.0	4.0	2.0	1.0	0.0	0.0	0.0	-	-
19-5	105.0	82.1	62.5	45.0	29.0	14.0	5.0	2.0	1.0	0.0	0.0	0.0	0.0	-	-
20-0	100.0	77.1	57.5	40.0	24.0	9.0	3.0	1.0	0.0	0.0	0.0	0.0	0.0	-	-
20-5	95.0	72.1	52.5	35.0	19.0	4.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-
21-0	90.0	67.1	47.5	30.0	14.0	3.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-
21-5	85.0	62.1	42.5	25.0	9.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-
22-0	80.0	57.1	37.5	20.0	4.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-
22-5	75.0	52.1	32.5	15.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-
23-0	70.0	47.1	27.5	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-
23-5	65.0	42.1	22.5	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-
24-0	60.0	37.1	17.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-
24-5	55.0	32.1	12.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-

CAPACITIES ARE FOR A CRAWLER MACHINE WHEN OPERATING ON A BARGE. MACHINE SHALL BE POSITIVELY SECURED TO PREVENT SHIFTING.
 CAPACITIES FOR VARIOUS BOOM LENGTHS AND OPERATING RADII ARE FOR FREELY SUSPENDED LOADS AND DO NOT EXCEED 75% OF A STATIC TIPPING
 LOAD. CAPACITIES BASED ON STRUCTURAL COMPETENCE ARE DENOTED BY AN ASTERISK (*).
 WEIGHT OF ALL LOAD BLOCKS, HOOKS, WEIGHT BALLS, SLINGS, HOIST LINES BENEATH BOOM POINT SHEAVES, ETC. IS CONSIDERED PART OF THE MAIN
 BOOM LOAD. BOOM IS NOT ALLOWED BEYOND APPROVED RADII WHERE COMBINED WEIGHTS ARE GREATER THAN RATED CAPACITY. WHERE NO CAPACITY IS
 SHOWN, OPERATION IS NOT INTERDOR APPROVED.
 REFER TO RIGGING #482277 LOAD LINE SPECIFICATION CHART #308 AND RANGE CHART #4796. CRANE OPERATOR JUDGMENT MUST BE USED TO ALLOW
 DEPRECIATION.
 OPERATING RADIUS IS THE HORIZONTAL DISTANCE FROM THE AXIS OF ROTATION AT BARGE DECK TO THE CENTER OF VERTICAL HOIST LINE OR LOAD
 BLOCK.
 MACHINE EQUIPPED WITH 24' EXTENDIBLE CRAWLERS, 42 IN. TREADS, 15' RETRACTABLE GENTRY, 12 PART BOOM HOIST REEVING, TAC 2 IN. BOOM
 PENDANTS, 1ST CRT. = 40,100#, 2ND CRT. = 35,500#, 3RD CRT. = 28,500#.

MANITOWOC ENGINEERING CO.
 MANITOWOC, WISCONSIN

EJK
 64/25/77 Rev. 8/1/78
 CRWC #05622

MANITOWOC 400CW - 24' CRAWLERS EXTENDED
 LIFT CRANE CAPACITIES - 104,400# CWT.
 BGC# #17 WITH OPEN THROAT TOP

CRAWLER MACHINE ON BARGE - 2 DEGREE MACHINE LIST

RAD. IN FT.	CAPACITIES IN THOUSANDS OF LBS.												RAD. IN FT.		
	60	70	80	90	100	110	120	130	140	150	160	170		180	190
16	230.6*	206.3*	182.0*	157.4*	143.7*	129.8*	117.4*	108.5*	98.6*	89.5*	82.5*	75.0*	66.1*	57.7*	50.1*
17	224.5*	201.6*	177.8*	154.0*	140.5*	127.1*	115.1*	106.7*	97.0*	87.9*	80.5*	73.0*	64.1*	55.7*	48.1*
18	218.4*	196.5*	173.8*	150.0*	137.2*	124.6*	113.1*	105.1*	95.1*	86.0*	78.6*	71.1*	62.2*	53.8*	46.2*
19	212.3*	191.4*	169.2*	145.4*	132.7*	120.1*	109.1*	101.5*	91.3*	82.2*	74.8*	67.3*	58.4*	50.0*	42.4*
20	206.2*	185.3*	163.0*	139.2*	126.5*	113.9*	103.3*	96.1*	85.7*	76.6*	69.2*	61.7*	52.8*	44.4*	36.8*
22	178.0*	157.1*	134.8*	111.0*	97.3*	84.7*	73.1*	65.5*	57.0*	49.6*	42.1*	34.6*	27.1*	19.6*	12.1*
24	153.8*	132.9*	110.6*	86.8*	73.1*	60.5*	48.9*	41.3*	33.8*	26.3*	18.8*	11.3*	3.8*		
26	125.6*	104.7*	82.4*	58.6*	44.9*	32.3*	20.7*	13.2*	5.7*						
30	114.2*	93.3*	71.0*	47.2*	33.5*	20.9*	13.4*	6.9*							
32	96.8*	75.9*	53.6*	38.8*	25.1*	12.5*	6.0*								
34	89.9*	69.0*	46.7*	32.0*	18.3*	10.1*	4.8*								
36	83.0*	62.1*	39.8*	25.2*	11.1*	6.9*	3.7*								
38	76.1*	55.2*	32.9*	18.3*	8.0*	4.8*	2.6*								
40	69.2*	48.3*	26.0*	11.5*	5.1*	3.0*	1.5*								
45	59.3*	41.4*	19.1*	6.2*	3.2*	1.7*	0.8*								
50	49.4*	34.5*	11.7*	3.3*	1.8*	0.9*	0.4*								
60	41.5*	27.6*	6.8*	1.9*	1.0*	0.5*	0.2*								
65	34.6*	20.7*	3.9*	1.0*	0.6*	0.3*	0.1*								
70	27.7*	13.8*	2.0*	0.6*	0.4*	0.2*	0.1*								
75	20.8*	6.9*	1.1*	0.3*	0.2*	0.1*	0.0*								
80	13.9*	4.0*	0.6*	0.2*	0.1*	0.0*	0.0*								
85	6.0*	2.1*	0.3*	0.1*	0.0*	0.0*	0.0*								
90	3.1*	1.2*	0.2*	0.0*	0.0*	0.0*	0.0*								
100	1.2*	0.5*	0.1*	0.0*	0.0*	0.0*	0.0*								
110	0.5*	0.2*	0.0*	0.0*	0.0*	0.0*	0.0*								
120	0.2*	0.1*	0.0*	0.0*	0.0*	0.0*	0.0*								
130	0.1*	0.0*	0.0*	0.0*	0.0*	0.0*	0.0*								
140	0.0*	0.0*	0.0*	0.0*	0.0*	0.0*	0.0*								
150	0.0*	0.0*	0.0*	0.0*	0.0*	0.0*	0.0*								
160	0.0*	0.0*	0.0*	0.0*	0.0*	0.0*	0.0*								
175	0.0*	0.0*	0.0*	0.0*	0.0*	0.0*	0.0*								

CAPACITIES ARE FOR A CRAWLER MACHINE OPERATING ON A BARGE. MACHINE SHALL BE POSITIVELY SECURED TO PREVENT SHIFTING. CAPACITIES FOR VARIOUS BOOM LENGTHS AND OPERATING RADIUS ARE FOR FREELY SUSPENDED LOADS AND DO NOT EXCEED 75% OF A STATIC TIPPING LOAD. CAPACITIES BASED ON STRUCTURAL COMPETENCE ARE DENOTED BY AN ASTERISK (*).
 WEIGHT OF ALL LOAD BLOCKS, HOOKS, WEIGHT BALL, SLINGS, HOIST LINES, BENEATH BOOM POINT SHEAVES, ETC. IS CONSIDERED PART OF THE MAIN BOOM LOAD. BOOM IS NOT TO BE LOWERED BEYOND RADIUS WHERE COMBINED WEIGHTS ARE GREATER THAN RATED CAPACITY. WHERE NO CAPACITY IS SHOWN, OPERATION IS NOT INTENDED OR APPROVED.
 REFER TO RIGGING #48221; LOAD LINE SPECIFICATION CHART #2308 AND RANGE CHART #4796. CRANE OPERATOR JUDGMENT MUST BE USED TO ALLOW FOR DYNAMIC LOAD EFFECTS OF SWINGING, HOISTING OR LOWERING, AS WELL AS ADVERSE OPERATING CONDITIONS AND PHYSICAL MACHINE DEPRECIATION.
 OPERATING RADIUS IS THE HORIZONTAL DISTANCE FROM THE AXIS OF ROTATION AT BARGE DECK TO THE CENTER OF VERTICAL HOIST LINE OR LOAD BLOCK.
 MACHINE EQUIPPED WITH 24' EXTENDIBLE CRAWLERS, 48 IN. TREADS, 15' RETRACTABLE GANTRY, 12 PART BOOM HOIST REEVING, TWO 2 IN. BOOM PENDANTS, 1ST CWT. = 40,100#; 2ND CWT. = 35,800#; 3RD CWT. = 28,500#.

MANITOWOC ENGINEERING CO.
 MANITOWOC, WISCONSIN

DJK
 04/28/77, Rev. 8/1/78
 DRWG. #6508-B

MANITOWOC 460GW - 24' CRANLERS EXTENDED

LIFT CRANE CAPACITIES - 105,400# GWT

BECK #17 WITH OPEN THROAT TOP

CRANLER MACHINE ON BARGE - 3 DEGREE MACHINE LIST

RAD. IN FT.	CAPACITIES IN THOUSANDS OF LBS.										RAD. IN FT.						
	50	60	70	80	90	100	110	120	130	140		150	160	170	180	190	200
17	201.0*																
17	176.4*																
17	172.4*																
17	155.25*																
22	163.7	137.0*	121.6*	156.4*	137.0*	121.6*	105.5*										
22	143.0	110.7	107.4	150.0	110.7	107.4	105.5*										
22	128.0	113.4	111.3	121.0	113.4	111.3	105.5*										
32	107.1	91.5	90.5	103.5	91.5	90.5	90.8*	90.8*									
32	91.5	74.8	74.0	80.5	74.8	74.0	78.2	82.4									
40	74.8	62.7	62.0	67.5	62.7	62.0	68.0	70.0	70.0								
40	62.7	51.5	51.0	55.0	51.5	51.0	54.2	56.2	56.2								
50	51.5	42.0	41.5	44.0	42.0	41.5	44.2	46.2	46.2								
50	42.0	34.0	33.5	36.0	34.0	33.5	36.2	38.2	38.2								
60	34.0	28.0	27.5	30.0	28.0	27.5	30.2	32.2	32.2								
60	28.0	23.0	22.5	25.0	23.0	22.5	25.2	27.2	27.2								
80	23.0	19.0	18.5	20.0	19.0	18.5	20.2	22.2	22.2								
80	19.0	16.0	15.5	17.0	16.0	15.5	17.2	19.2	19.2								
100	16.0	13.0	12.5	14.0	13.0	12.5	14.2	16.2	16.2								
100	13.0	11.0	10.5	12.0	11.0	10.5	12.2	14.2	14.2								
120	11.0	9.0	8.5	10.0	9.0	8.5	10.2	12.2	12.2								
120	9.0	7.5	7.0	8.0	7.5	7.0	8.2	10.2	10.2								
150	7.5	6.5	6.0	7.0	6.5	6.0	7.2	9.2	9.2								
150	6.5	5.5	5.0	6.0	5.5	5.0	6.2	8.2	8.2								
200	5.0	4.5	4.0	5.0	4.5	4.0	5.2	7.2	7.2								

CAPACITIES ARE FOR A CRANLER MACHINE WHEN OPERATING ON A BARGE. MACHINE SHALL BE POSITIVELY SECURED TO PREVENT SHIFTING, TIPPING, OR COLLAPSE. CAPACITIES FOR VARIOUS BOOM LENGTHS AND OPERATING RADII ARE FOR FREELY SUSPENDED LOADS AND DO NOT EXCEED 75% OF A STATIC TIPPING LOAD. CAPACITIES BASED ON STRUCTURAL COMPETENCE ARE DENOTED BY AN ASTERISK (*). WEIGHT OF ALL LOAD BLOCKS, HOOKS, WEIGHT BALLS, SLINGS, HOIST LINES BENEATH BOOM POINT SHEAVES, ETC. IS CONSIDERED PART OF THE MAIN BOOM LOAD. BOOM IS NOT TO BE LOWERED BEYOND RADII WHERE COMBINED WEIGHTS ARE GREATER THAN RATED CAPACITY. WHERE NO CAPACITY IS SHOWN, OPERATION IS NOT INTENDED OR APPROVED.

REFER TO RIGGING #48227, LOAD LINE SPECIFICATION CHART #5308 AND RANGE CHART #4796. CRANE OPERATOR JUDGMENT MUST BE USED TO ALLOW FOR DYNAMIC LOAD EFFECTS OF SWINGING, HOISTING OR LOWERING, AS WELL AS ADVERSE OPERATING CONDITIONS AND PHYSICAL MACHINE DEPRECIATION.

OPERATING RADIUS IS THE HORIZONTAL DISTANCE FROM THE AXIS OF ROTATION AT BARGE DECK TO THE CENTER OF VERTICAL HOIST LINE OR LOAD BLOCK.

MACHINE EQUIPPED WITH 24' EXTENDIBLE CRANLERS. 46 IN. TREADS, 15' RETRACTABLE GANTRY, 12 PART BOOM HOIST KEEPING, TWO 2 IN. BOOM PENDANTS, 1ST CRT. = 40,100#, 2ND CRT. = 35,800#, 3RD CRT. = 28,500#.

MANITOWOC ENGINEERING CO.
MANITOWOC, WISCONSIN

DJK
2/28/77, rev. 8/1/78
Drawing #8908-C

MANITOWOC 4000W - 24' CRAWLERS EXTENDED

LIFT CRANE CAPACITIES - 104,400# CRT.

BOOM #22 WITH OPEN THROAT TOP

CRAWLER MACHINE ON BARGE - 0 DEGREE MACHINE LIST

RAD. IN FT.	CAPACITIES IN THOUSANDS OF LBS.										RAD. IN FT.			
	70	80	90	100	110	120	130	140	150	160		170	180	190
17	300.0*	284.0*	267.0*	250.0*	233.0*	215.9*	186.8*	157.0*	129.7	102.4	74.9	47.5	20.1	9.5
18	285.0*	269.0*	252.0*	235.0*	217.9*	188.8*	159.0*	130.5	103.2	75.7	48.2	20.8	9.8	9.5
20	249.5*	233.5*	217.0*	200.0*	182.9*	153.8*	124.0*	95.5	68.2	40.7	23.4	12.0	6.0	5.8
22	183.0*	167.0*	150.5*	134.0*	117.0*	90.0*	63.0*	36.0	29.0	17.0	9.0	4.0	2.0	2.0
24	160.0*	144.0*	128.0*	112.0*	96.0*	70.0*	44.0*	28.0	22.0	13.0	7.0	3.0	1.5	1.5
26	143.0*	127.0*	111.0*	95.0*	79.0*	53.0*	27.0*	17.0	14.0	8.0	4.0	2.0	1.0	1.0
28	128.0*	112.0*	96.0*	80.0*	64.0*	38.0*	22.0*	13.0	10.0	6.0	3.0	1.5	0.8	0.8
30	116.0*	100.0*	84.0*	68.0*	52.0*	26.0*	16.0*	10.0	7.0	4.0	2.0	1.0	0.5	0.5
32	106.0*	90.0*	74.0*	58.0*	42.0*	19.0*	12.0*	7.0	5.0	3.0	1.5	0.8	0.4	0.4
34	97.0*	81.0*	65.0*	49.0*	33.0*	14.0*	9.0*	5.0	3.0	2.0	1.0	0.5	0.3	0.3
36	87.0*	71.0*	55.0*	39.0*	23.0*	10.0*	6.0*	3.0	2.0	1.0	0.5	0.3	0.2	0.2
40	71.0*	55.0*	39.0*	23.0*	14.0*	6.0*	3.0*	2.0	1.0	0.5	0.3	0.2	0.1	0.1
45	54.0*	38.0*	22.0*	13.0*	8.0*	4.0*	2.0*	1.0	0.5	0.3	0.2	0.1	0.05	0.05
50	48.0*	32.0*	16.0*	9.0*	5.0*	2.0*	1.0*	0.5	0.3	0.2	0.1	0.05	0.02	0.02
55	43.0*	27.0*	11.0*	6.0*	3.0*	1.0*	0.5*	0.3	0.2	0.1	0.05	0.02	0.01	0.01
60	38.0*	22.0*	8.0*	4.0*	2.0*	0.5*	0.3*	0.2	0.1	0.05	0.02	0.01	0.005	0.005
65	33.0*	17.0*	5.0*	2.0*	1.0*	0.3*	0.2*	0.1	0.05	0.02	0.01	0.005	0.002	0.002
70	28.0*	12.0*	3.0*	1.0*	0.5*	0.2*	0.1*	0.05	0.02	0.01	0.005	0.002	0.001	0.001
75	23.0*	7.0*	1.0*	0.5*	0.2*	0.1*	0.05*	0.02	0.01	0.005	0.002	0.001	0.0005	0.0005
80	18.0*	5.0*	0.5*	0.2*	0.1*	0.05*	0.02*	0.01	0.005	0.002	0.001	0.0005	0.0002	0.0002
85	13.0*	3.0*	0.3*	0.1*	0.05*	0.02*	0.01*	0.005	0.002	0.001	0.0005	0.0002	0.0001	0.0001
90	9.0*	2.0*	0.2*	0.05*	0.02*	0.01*	0.005*	0.002	0.001	0.0005	0.0002	0.0001	0.00005	0.00005
95	6.0*	1.0*	0.1*	0.05*	0.02*	0.01*	0.005*	0.002	0.001	0.0005	0.0002	0.0001	0.00005	0.00005
100	4.0*	0.5*	0.05*	0.02*	0.01*	0.005*	0.002*	0.001	0.0005	0.0002	0.0001	0.00005	0.00002	0.00002
105	3.0*	0.3*	0.03*	0.01*	0.005*	0.002*	0.001*	0.0005	0.0002	0.0001	0.00005	0.00002	0.00001	0.00001
110	2.0*	0.2*	0.02*	0.005*	0.002*	0.001*	0.0005*	0.0002	0.0001	0.00005	0.00002	0.00001	0.000005	0.000005
115	1.5*	0.15*	0.015*	0.005*	0.002*	0.001*	0.0005*	0.0002	0.0001	0.00005	0.00002	0.00001	0.000005	0.000005
120	1.0*	0.1*	0.01*	0.005*	0.002*	0.001*	0.0005*	0.0002	0.0001	0.00005	0.00002	0.00001	0.000005	0.000005
125	0.8*	0.08*	0.008*	0.003*	0.001*	0.0005*	0.0002*	0.0001	0.00005	0.00002	0.00001	0.000005	0.000002	0.000002
130	0.6*	0.06*	0.006*	0.002*	0.001*	0.0005*	0.0002*	0.0001	0.00005	0.00002	0.00001	0.000005	0.000002	0.000002
135	0.4*	0.04*	0.004*	0.001*	0.0005*	0.0002*	0.0001*	0.00005	0.00002	0.00001	0.000005	0.000002	0.000001	0.000001
140	0.3*	0.03*	0.003*	0.001*	0.0005*	0.0002*	0.0001*	0.00005	0.00002	0.00001	0.000005	0.000002	0.000001	0.000001
145	0.2*	0.02*	0.002*	0.0005*	0.0002*	0.0001*	0.00005*	0.00002	0.00001	0.000005	0.000002	0.000001	0.0000005	0.0000005
150	0.15*	0.015*	0.0015*	0.0005*	0.0002*	0.0001*	0.00005*	0.00002	0.00001	0.000005	0.000002	0.000001	0.0000005	0.0000005
155	0.1*	0.01*	0.001*	0.0005*	0.0002*	0.0001*	0.00005*	0.00002	0.00001	0.000005	0.000002	0.000001	0.0000005	0.0000005
160	0.08*	0.008*	0.0008*	0.0005*	0.0002*	0.0001*	0.00005*	0.00002	0.00001	0.000005	0.000002	0.000001	0.0000005	0.0000005
165	0.06*	0.006*	0.0006*	0.0005*	0.0002*	0.0001*	0.00005*	0.00002	0.00001	0.000005	0.000002	0.000001	0.0000005	0.0000005

CAPACITIES ARE FOR A CRAWLER MACHINE WHEN OPERATING ON A BARGE. MACHINE SHALL BE POSITIVELY SECURED TO PREVENT SHIFTING. CAPACITIES FOR VARIOUS BOOM LENGTHS AND OPERATING RADII ARE FOR FREELY SUSPENDED LOADS AND DO NOT EXCEED 75% OF A STATIC TIPPING LOAD. CAPACITIES BASED ON STRUCTURAL COMPETENCE ARE DENOTED BY AN ASTERISK (*). WEIGHT OF ALL LOAD BLOCKS, HOOKS, WEIGHT BALLS, SLINGS, HOIST LINES BENEATH BOOM POINT SHEAVES, ETC. IS CONSIDERED PART OF THE MAIN BOOM POINT IS ATTACHED. DEDUCT 1200# FROM ABOVE CAPACITIES WHEN TRINGLE SHEAVE UPPER BOOM POINT IS ATTACHED AND 1,500# WHEN TAG SHEAVE UPPER CAPACITY IS SHOWN. OPERATION IS NOT INTENDED OR APPROVED. REFER TO RIGGING #48168. LOAD LINE SPECIFICATION CHART #5320 AND RANGE CHART #5359. CRANE OPERATOR JUDGMENT MUST BE USED TO ALLOW FOR DYNAMIC LOAD EFFECTS OF SWINGING, HOISTING OR LOWERING, AS WELL AS ADVERSE OPERATING CONDITIONS AND PHYSICAL MACHINE DEPRECIATION. OPERATING RADIUS IS THE HORIZONTAL DISTANCE FROM THE AXIS OF ROTATION AT BARGE DECK TO THE CENTER OF VERTICAL HOIST LINE OR LOAD BLOCK. MACHINE EQUIPPED WITH 24' EXTENDIBLE CRAWLERS, 48 IN. TREADS, 15' RETRACTABLE GANTRY, 12 PART BOOM HOIST REEVING, FOUR 1-3/8 IN. BOOM PENDANTS, 1ST CRT. = 40,100#, 2ND CRT. = 35,900#, 3RD CRT. = 28,500#.

DJK
04/27/77 Rev. 8/1/78
DRMG. #6909-A

MANITOWOC ENGINEERING CO.
MANITOWOC, WISCONSIN

MANITOWOC 4000W - 24° CRAWLERS EXTENDED
 LIFT CRANE CAPACITIES - 104,400# CWT.
 BOOM #22 WITH OPEN THROAT TOP
 CRAWLER MACHINE ON BARGE - 2 DEGREE MACHINE LIST

RAD. FT.	CAPACITIES IN THOUSANDS OF LBS.										RAD. FT.			
	70	80	90	100	110	120	130	140	150	160		170	180	190
118	210.8	188.1	182.8	151.6	136.7	120.1	107.0	97.0	86.2	78.4	71.6	65.5	60.5	55.4
119	208.5	186.2	181.0	150.0	128.8	112.3	99.5	90.0	80.0	72.5	66.5	61.0	56.0	51.0
120	206.2	184.0	178.8	148.0	127.0	110.5	97.5	88.0	78.0	70.5	64.5	59.0	54.0	49.0
121	204.0	181.8	176.6	146.0	125.0	108.5	95.5	86.0	76.0	68.5	62.5	57.0	52.0	47.0
122	201.8	179.6	174.4	144.0	123.0	106.5	93.5	84.0	74.0	66.5	60.5	55.0	50.0	45.0
123	199.6	177.4	172.2	142.0	121.0	104.5	91.5	82.0	72.0	64.5	58.5	53.0	48.0	43.0
124	197.4	175.2	170.0	140.0	119.0	102.5	89.5	80.0	70.0	62.5	56.5	51.0	46.0	41.0
125	195.2	173.0	167.8	138.0	117.0	100.5	87.5	78.0	68.0	60.5	54.5	49.0	44.0	39.0
126	193.0	170.8	165.6	136.0	115.0	98.5	85.5	76.0	66.0	58.5	52.5	47.0	42.0	37.0
127	190.8	168.6	163.4	134.0	113.0	96.5	83.5	74.0	64.0	56.5	50.5	45.0	40.0	35.0
128	188.6	166.4	161.2	132.0	111.0	94.5	81.5	72.0	62.0	54.5	48.5	43.0	38.0	33.0
129	186.4	164.2	159.0	130.0	109.0	92.5	79.5	70.0	60.0	52.5	46.5	41.0	36.0	31.0
130	184.2	162.0	156.8	128.0	107.0	90.5	77.5	68.0	58.0	50.5	44.5	39.0	34.0	29.0
131	182.0	159.8	154.6	126.0	105.0	88.5	75.5	66.0	56.0	48.5	42.5	37.0	32.0	27.0
132	179.8	157.6	152.4	124.0	103.0	86.5	73.5	64.0	54.0	46.5	40.5	35.0	30.0	25.0
133	177.6	155.4	150.2	122.0	101.0	84.5	71.5	62.0	52.0	44.5	38.5	33.0	28.0	23.0
134	175.4	153.2	148.0	120.0	99.0	82.5	69.5	60.0	50.0	42.5	36.5	31.0	26.0	21.0
135	173.2	151.0	145.8	118.0	97.0	80.5	67.5	58.0	48.0	40.5	34.5	29.0	24.0	19.0
136	171.0	148.8	143.6	116.0	95.0	78.5	65.5	56.0	46.0	38.5	32.5	27.0	22.0	17.0
137	168.8	146.6	141.4	114.0	93.0	76.5	63.5	54.0	44.0	36.5	30.5	25.0	20.0	15.0
138	166.6	144.4	139.2	112.0	91.0	74.5	61.5	52.0	42.0	34.5	28.5	23.0	18.0	13.0
139	164.4	142.2	137.0	110.0	89.0	72.5	59.5	50.0	40.0	32.5	26.5	21.0	16.0	11.0
140	162.2	140.0	134.8	108.0	87.0	70.5	57.5	48.0	38.0	30.5	24.5	19.0	14.0	9.0
141	160.0	137.8	132.6	106.0	85.0	68.5	55.5	46.0	36.0	28.5	22.5	17.0	12.0	7.0
142	157.8	135.6	130.4	104.0	83.0	66.5	53.5	44.0	34.0	26.5	20.5	15.0	10.0	5.0
143	155.6	133.4	128.2	102.0	81.0	64.5	51.5	42.0	32.0	24.5	18.5	13.0	8.0	3.0
144	153.4	131.2	126.0	100.0	79.0	62.5	49.5	40.0	30.0	22.5	16.5	11.0	6.0	1.0
145	151.2	129.0	123.8	98.0	77.0	60.5	47.5	38.0	28.0	20.5	14.5	9.0	4.0	0.0
146	149.0	126.8	121.6	96.0	75.0	58.5	45.5	36.0	26.0	18.5	12.5	7.0	2.0	0.0
147	146.8	124.6	119.4	94.0	73.0	56.5	43.5	34.0	24.0	16.5	10.5	5.0	1.0	0.0
148	144.6	122.4	117.2	92.0	71.0	54.5	41.5	32.0	22.0	14.5	8.5	3.0	0.0	0.0
149	142.4	120.2	115.0	90.0	69.0	52.5	39.5	30.0	20.0	12.5	6.5	1.0	0.0	0.0
150	140.2	118.0	112.8	88.0	67.0	50.5	37.5	28.0	18.0	10.5	4.5	0.0	0.0	0.0
151	138.0	115.8	110.6	86.0	65.0	48.5	35.5	26.0	16.0	8.5	2.5	0.0	0.0	0.0
152	135.8	113.6	108.4	84.0	63.0	46.5	33.5	24.0	14.0	6.5	0.5	0.0	0.0	0.0
153	133.6	111.4	106.2	82.0	61.0	44.5	31.5	22.0	12.0	4.5	0.0	0.0	0.0	0.0
154	131.4	109.2	104.0	80.0	59.0	42.5	29.5	20.0	10.0	2.5	0.0	0.0	0.0	0.0
155	129.2	107.0	101.8	78.0	57.0	40.5	27.5	18.0	8.0	0.5	0.0	0.0	0.0	0.0
156	127.0	104.8	99.6	76.0	55.0	38.5	25.5	16.0	6.0	0.0	0.0	0.0	0.0	0.0

CAPACITIES ARE FOR A CRAWLER MACHINE WHEN OPERATING ON A BARGE. MACHINE SHALL BE POSITIVELY SECURED TO PREVENT SHIFTING. TIPPING LOADS. CAPACITIES BASED ON STRUCTURAL COMPETENCE ARE DENOTED BY AN ASTERISK (*).
 WEIGHT OF ALL LOAD BLOCKS, HOOKS, WEIGHT BALLS, SLINGS, HOIST LINES BENEATH BOOM POINT SHEAVES, ETC. IS CONSIDERED PART OF THE MAIN BOOM POINT IS ATTACHED. FROM ABOUT 1,200# CAPACITIES WHEN SINGLE SHEAVE UPPER BOOM POINT IS ATTACHED AND 1,500# WHEN TWO SHEAVE UPPER BOOM POINT IS SHOWN, OPERATION IS NOT INTERFERED BEYOND RADIUS WHERE COMBINED WEIGHTS ARE GREATER THAN RATED CAPACITY. WHERE NO REFER TO RIGGING #48168; LOAD LINE SPECIFICATION CHART #5320 AND RANGE CHART #5359. CRANE OPERATOR JUDGMENT MUST BE USED TO ALLOW FOR DYNAMIC LOAD EFFECTS OF SWINGING, HOISTING OR LOWERING, AS WELL AS ADVERSE OPERATING CONDITIONS AND PHYSICAL MACHINE DEPRECIATION.
 OPERATING RADIUS IS THE HORIZONTAL DISTANCE FROM THE AXIS OF ROTATION AT BARGE DECK TO THE CENTER OF VERTICAL HOIST LINE OR LOAD BLOCK.
 MACHINE EQUIPPED WITH 24° EXTENDIBLE CRAWLERS, 48 IN. TREADS, 15° RETRACTABLE GANTRY, 12 PART BOOM HOIST REEVING, FOUR 1-3/8 IN. BOOM PENDANTS, 1ST CWT. = 40,100#, 2ND CWT. = 35,600#, 3RD CWT. = 28,500#.

MANITOWOC 4000W - 24' CRAWLERS EXTENDED

LIFT CRANE CAPACITIES - 104,400# CRT.

BOOM #22 WITH OPEN THROAT TOP

CRAWLER MACHINE ON BARGE - 3 DEGREE MACHINE LIST

RAD. IN. FT.	CAPACITIES IN THOUSANDS OF LBS.												RAD. IN. FT.						
	70	80	90	100	110	120	130	140	150	160	170	180		190	200				
18	192.9#																		
19	184.6#																		
20	176.3#	168.0#																	
21	168.0#	159.7#	142.0#																
22	159.7#	151.4#	133.7#	124.0#	109.2#														
23	151.4#	143.1#	125.4#	116.0#	101.2#	96.9													
24	143.1#	134.8#	117.1#	108.0#	93.2#	87.6													
25	134.8#	126.5#	108.8#	100.0#	85.2#	79.6													
26	126.5#	118.2#	100.0#	91.0#	76.2#	70.6													
27	118.2#	110.0#	92.0#	83.0#	68.2#	62.6													
28	110.0#	102.0#	84.0#	75.0#	60.2#	54.6													
29	102.0#	94.0#	76.0#	67.0#	52.2#	46.6													
30	94.0#	86.0#	68.0#	59.0#	44.2#	38.6													
31	86.0#	78.0#	60.0#	51.0#	36.2#	30.6													
32	78.0#	70.0#	52.0#	43.0#	28.2#	22.6													
33	70.0#	62.0#	44.0#	35.0#	20.2#	14.6													
34	62.0#	54.0#	36.0#	27.0#	12.2#	6.6													
35	54.0#	46.0#	28.0#	19.0#	4.2#														
36	46.0#	38.0#	20.0#	11.0#															
37	38.0#	30.0#	12.0#	3.0#															
38	30.0#	22.0#	4.0#																
39	22.0#	14.0#																	
40	14.0#	6.0#																	
41	6.0#																		
42																			
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CAPACITIES ARE FOR A CRAWLER MACHINE WHEN OPERATING ON A BARGE. MACHINE SHALL BE POSITIVELY SECURED TO PREVENT SHIFTING. TIPPING CAPACITIES ARE FOR LOUS BOOM LENGTHS AND OPERATING RADIUS ARE FOR FREELY SUSPENDED LOADS AND DO NOT EXCEED 75% OF A STATIC TIPPING LOAD. CAPACITIES BASED ON STRUCTURAL COMPETENCE ARE DENOTED BY AN ASTERISK (*).

WEIGHT OF ALL LOAD BLOCKS, HOOKS, WEIGHT BALLS, SLINGS, HOIST LINES BENEATH BOOM POINT, SHEAVES, ETC. IS CONSIDERED PART OF THE MAIN BOOM LOAD. DEDUCT 1,200# FROM BOOM CAPACITIES WHEN SINGLE SHEAVE UPPER BOOM POINT IS ATTACHED AND 1,500# WHEN TWO SHEAVE UPPER BOOM POINT IS ATTACHED. BOOM IS NOT TO BE LOWERED BEYOND RADIUS WHERE COMBINED WEIGHTS ARE GREATER THAN RATED CAPACITY. WHERE NO CAPACITY IS SHOWN, OPERATION IS NOT INTENDED OR APPROVED.

REFER TO RIGGING #48168; LOAD LINE SPECIFICATION CHART #5320 AND RANGE CHART #5355. CRANE OPERATOR JUDGMENT MUST BE USED TO ALLOW FOR DYNAMIC LOAD EFFECTS OF SWINGING, HOISTING OR LOWERING, AS WELL AS ADVERSE OPERATING CONDITIONS AND PHYSICAL MACHINE DEPRECIATION.

OPERATING RADIUS IS THE HORIZONTAL DISTANCE FROM THE AXIS OF ROTATION AT BARGE DECK TO THE CENTER OF VERTICAL HOIST LINE OR LOAD BLOCK.

MACHINE EQUIPPED WITH 24' EXTENDIBLE CRAWLERS, 48 IN. TREADS, 15' RETRACTABLE GENTRY, 12 PART BOOM HOIST REEVING, FOUR 1-3/8 IN. BOOM PENDANTS, 1ST CRT. = 40,100#, 2ND CRT. = 35,800#, 3RD CRT. = 28,500#.