



ROUGH TERRAIN CRANE

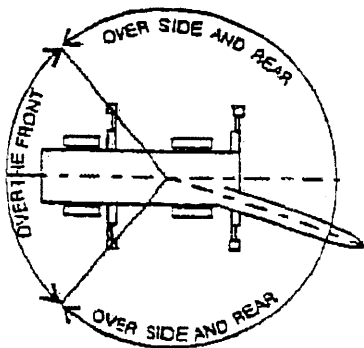
TR-500M-3-00103



TADANO TR-500M-3 HYDRAULIC ROUGH TERRAIN CRANE
TOTAL RATED LOAD IN KILOGRAMS

THIS DOCUMENT SHOULD BE READ IN CONJUNCTION WITH THE A.M.L.

1. BOOM: OUTRIGGERS FULLY EXTENDED (7.3m) - 360°							
A (m) B (m)	9.7m	16.0m	22.3m	28.6m	34.9m	38.05m	41.2m
2.5	50.0	30.0	20.0	12.0			
3.0	50.0	30.0	20.0	12.0			
3.5	45.0	30.0	20.0	12.0	11.0		
4.0	39.5	30.0	20.0	12.0	11.0	8.5	
4.5	35.5	30.0	20.0	12.0	11.0	8.5	
5.0	32.0	29.0	20.0	12.0	11.0	8.5	7.0
5.5	29.0	27.0	19.8	12.0	11.0	8.5	7.0
6.0	26.5	24.6	18.7	12.0	11.0	8.5	7.0
6.5	24.0	22.7	17.6	12.0	11.0	8.5	7.0
7.0	22.0	20.9	16.7	12.0	11.0	8.5	7.0
8.0		17.8	15.0	12.0	10.1	8.5	7.0
9.0		14.6	13.4	11.5	9.4	8.5	7.0
10.0		12.0	11.3	10.5	8.7	7.9	7.0
11.0		10.0	9.4	9.5	8.1	7.35	6.5
12.0		8.3	8.0	8.6	7.5	6.85	6.0
13.0		7.1	6.8	7.4	7.0	6.4	5.6
14.0			5.9	6.6	6.5	6.0	5.3
16.0			4.2	5.0	5.4	5.3	4.7
18.0			3.0	3.8	4.3	4.5	4.15
20.0				2.95	3.4	3.55	3.6
22.0				2.3	2.7	2.85	3.0
24.0				1.65	2.1	2.3	2.4
26.0					1.65	1.85	1.95
28.0					1.25	1.4	1.55
30.0					0.9	1.0	1.2
32.0						0.7	0.9
34.0							0.6
a (°)	0~83					16~83	28~83



WORKING RADIUS DIAGRAM

A : BOOM LENGTH (m)
B : WORKING RADIUS (m)

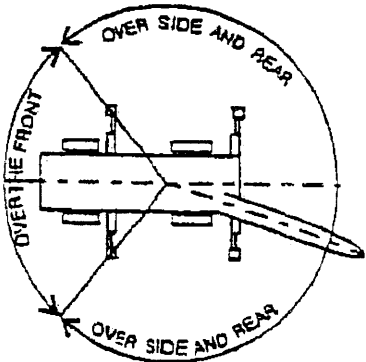
a = Boom angle range
(for the unladen condition)



TADANO TR-500M-3 HYDRAULIC ROUGH TERRAIN CRANE
TOTAL RATED LOAD IN KILOGRAMS

THIS DOCUMENT SHOULD BE READ IN CONJUNCTION WITH THE A.M.L.

2. BOOM: OUTRIGGERS MIDDLE EXTENDED (6.7m) – Over sides							
A (m) B (m)	9.7m	16.0m	22.3m	28.6m	34.9m	38.05m	41.2m
2.5	50.0	30.0	20.0	12.0			
3.0	50.0	30.0	20.0	12.0			
3.5	43.0	30.0	20.0	12.0	11.0		
4.0	38.0	30.0	20.0	12.0	11.0	8.5	
4.5	34.0	30.0	20.0	12.0	11.0	8.5	
5.0	30.5	29.0	20.0	12.0	11.0	8.5	7.0
5.5	27.5	27.0	19.8	12.0	11.0	8.5	7.0
6.0	24.2	24.0	18.7	12.0	11.0	8.5	7.0
6.5	21.4	21.2	17.6	12.0	11.0	8.5	7.0
7.0	19.0	18.9	16.7	12.0	11.0	8.5	7.0
8.0		15.7	15.0	12.0	10.1	8.5	7.0
9.0		12.8	12.3	11.5	9.4	8.5	7.0
10.0		10.4	9.9	10.5	8.7	7.9	7.0
11.0		8.5	8.2	9.1	8.1	7.35	6.5
12.0		7.1	6.85	7.75	7.5	6.85	6.0
13.0		6.1	5.7	6.7	7.0	6.4	5.6
14.0			4.8	5.8	6.3	6.0	5.3
16.0			3.4	4.3	4.8	5.0	4.7
18.0			2.3	3.2	3.75	3.9	4.0
20.0				2.35	2.9	3.1	3.25
22.0				1.7	2.2	2.4	2.6
24.0				1.2	1.65	1.8	2.0
26.0					1.2	1.4	1.55
28.0					0.8	1.0	1.1
30.0					0.5	0.7	0.8
32.0							0.5
a (°)	0~83				23~83	27~83	36~83



WORKING RADIUS DIAGRAM

A : BOOM LENGTH (m)
B : WORKING RADIUS (m)

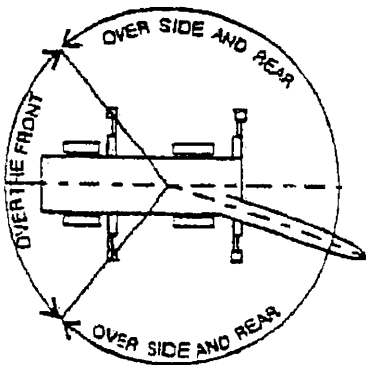
a = Boom angle range
(for the unladen
condition)



TADANO TR-500M-3 HYDRAULIC ROUGH TERRAIN CRANE
TOTAL RATED LOAD IN KILOGRAMS

THIS DOCUMENT SHOULD BE READ IN CONJUNCTION WITH THE A.M.L.

2. BOOM: OUTRIGGERS MIDDLE EXTENDED (5.5m) – Over sides							
A (m) B (m)	9.7m	16.0m	22.3m	28.6m	34.9m	38.05m	41.2m
2.5	45.0	30.0	20.0	12.0			
3.0	45.0	30.0	20.0	12.0			
3.5	41.0	30.0	20.0	12.0	11.0		
4.0	36.8	30.0	20.0	12.0	11.0	8.5	
4.5	33.2	30.0	20.0	12.0	11.0	8.5	
5.0	30.2	27.0	20.0	12.0	11.0	8.5	7.0
5.5	25.2	24.0	19.8	12.0	11.0	8.5	7.0
6.0	21.0	20.7	18.7	12.0	11.0	8.5	7.0
6.5	18.2	18.0	17.0	12.0	11.0	8.5	7.0
7.0	15.5	15.2	15.1	12.0	11.0	8.5	7.0
8.0		11.9	11.6	12.0	10.1	8.5	7.0
9.0		9.5	9.15	10.2	9.4	8.5	7.0
10.0		7.65	7.35	8.35	8.4	7.9	7.0
11.0		6.25	6.0	7.0	7.3	7.35	6.5
12.0		5.15	4.9	5.85	6.3	6.3	6.0
13.0		4.2	4.0	5.0	5.5	5.5	5.6
14.0			3.25	4.2	4.75	4.8	5.0
16.0			2.05	3.0	3.55	3.6	3.8
18.0			1.05	2.1	2.65	2.7	2.9
20.0				1.35	1.95	2.05	2.25
22.0				0.7	1.3	1.5	1.7
24.0					0.8	1.0	1.2
26.0						0.6	0.8
a (°)	0~83			24~83	38~83	44~83	49~83



WORKING RADIUS DIAGRAM

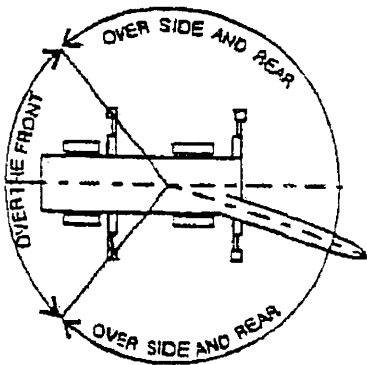
A : BOOM LENGTH (m)
B : WORKING RADIUS (m)

a = Boom angle range
(for the unladen condition)

TADANO TR-500M-3 HYDRAULIC ROUGH TERRAIN CRANE
TOTAL RATED LOAD IN KILOGRAMS

THIS DOCUMENT SHOULD BE READ IN CONJUNCTION WITH THE A.M.L.

2. BOOM: OUTRIGGERS MINIMUM EXTENDED (2.54m) – Over sides							
A (m) B (m)	9.7m	16.0m	22.3m	28.6m	34.9m	38.05m	41.2m
2.5	15.0	11.0	11.0	7.0			
3.0	15.0	11.0	11.0	7.0			
3.5	15.0	11.0	11.0	7.0	6.0		
4.0	13.8	11.0	11.0	7.0	6.0	5.5	
4.5	11.3	10.5	10.4	7.0	6.0	5.5	
5.0	9.3	8.8	8.55	7.0	6.0	5.5	5.0
5.5	7.7	7.3	7.15	6.5	6.0	5.5	5.0
6.0	6.5	6.1	6.0	5.8	5.5	5.3	5.0
6.5	5.5	5.2	5.0	5.1	5.0	5.0	5.0
7.0	4.6	4.4	4.2	4.5	4.5	4.5	4.5
8.0		3.2	3.0	3.5	3.6	3.7	3.8
9.0		2.3	2.05	2.5	2.8	2.9	3.1
10.0		1.5	1.35	1.8	2.1	2.3	2.5
11.0		0.8					
a (°)	0~83	34~83	58~83	66~83	71~83	73~83	74~83



WORKING RADIUS DIAGRAM

A : BOOM LENGTH (m)
B : WORKING RADIUS (m)

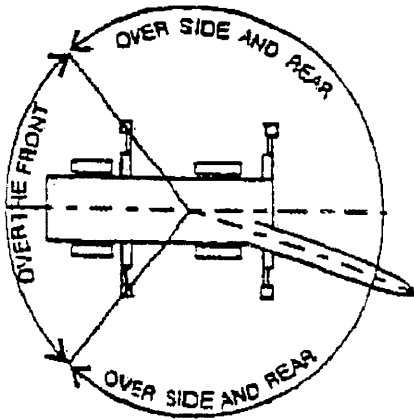
a = Boom angle range
(for the unladen
condition)



TADANO TR-500M-3 HYDRAULIC ROUGH TERRAIN CRANE
TOTAL RATED LOAD IN KILOGRAMS

THIS DOCUMENT SHOULD BE READ IN CONJUNCTION WITH THE A.M.L.

2. BOOM: OUTRIGGERS MINIMUM EXTENDED (4.0m) – Over sides							
A (m) B (m)	9.7m	16.0m	22.3m	28.6m	34.9m	38.05m	41.2m
2.5	40.0	30.0	20.0	12.0			
3.0	40.0	30.0	20.0	12.0			
3.5	33.4	30.0	20.0	12.0	11.0		
4.0	26.5	27.0	20.0	12.0	11.0	8.5	
4.5	21.0	21.5	20.0	12.0	11.0	8.5	
5.0	17.4	17.4	17.0	12.0	11.0	8.5	7.0
5.5	14.6	14.5	14.2	12.0	11.0	8.5	7.0
6.0	12.5	12.2	12.0	12.0	11.0	8.5	7.0
6.5	10.5	10.5	10.4	11.3	10.3	8.5	7.0
7.0	9.0	9.1	9.0	10.0	9.5	8.5	7.0
8.0		6.9	6.8	7.8	8.0	8.0	7.0
9.0		5.4	5.25	6.2	6.65	6.7	6.5
10.0		4.3	4.1	5.0	5.6	5.7	5.9
11.0		3.4	3.15	4.05	4.65	4.75	5.0
12.0		2.6	2.45	3.3	3.85	4.0	4.2
13.0		1.85	1.75	2.7	3.2	3.35	3.55
14.0			1.15	2.15	2.7	2.85	3.0
16.0				1.2	1.8	2.0	2.15
18.0					1.1	1.3	1.5
20.0						0.75	0.95
a (°)	0~83		38~83	47~83	53~83	56~83	60~83



WORKING RADIUS DIAGRAM

A : BOOM LENGTH (m)
B : WORKING RADIUS (m)
a = Boom angle range
(for the unladen condition)



PRECAUTIONS TO BE TAKEN WHEN THE OUTRIGGERS ARE EXTENDED:

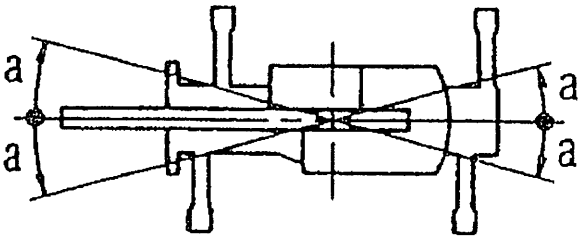
- 1. The total rated loads shown are for the case where the crane is set horizontally on firm level ground. They include the weights of the slings and hooks (main hook: 460kg, 25t hook: 290kg, auxiliary hook: 100kg).
The values above the bold lines are based on the crane strength while those below are based on the crane stability.
- 2. Since the total rated loads are based on the actual working radii including the deflection of the boom, operations should be performed in accordance with the working radii.
- 3. Jib operations should be performed in accordance with the boom angle, irrespective of the boom length. The working radii are reference values for the case where the jib is mounted to a 41.2m boom.
- 4. The total rated load for the single top shall be the value obtained by subtracting the weight of the hook mounted to the boom from the total rated load of the boom and must not exceed 4.0t.
- 5. As a rule, free-fall operation should be performed only when lowering the hook alone. If a hoisted load must be lowered by free-fall operation, the load must be kept below 1/5th of the total rated load and sudden braking operations must be avoided.
- 6. The chart below shows the standard number of part lines for each boom length. The load per line should not exceed 4.17t for the main winch and 4.0t for the auxiliary winch.

BOOM LENGTH	9.7m	16.0m	22.3m	28.6m	34.9m	38.05m	41.2m	JIB
NO. OF PART LINES	12	8	5(6)	4	4	4	4	1

The value in () is for a 25t hook.

- 7. The hoisting performance for the “over sides” range will differ according to the extended width of the outriggers. Operations should be performed in accordance with the performance corresponding to the extended width. Also, although the hoisting performances for the “over front” and “Over rear” ranges are equivalent to those of the “outriggers fully extended” condition, the front and rear ranges (angle a) will differ according to the width to which the outriggers are extended in the left and right directions.

Extended width	Middle extended (6.7 m)	Middle extended (5.5m)	Minimum extended (4.0m)
Angle a°	30	25	15



- 8. Total rated loads below bold lines do not exceed 75% of tipping load.
- 9. Special weather caution: Refer to the operation and maintenance manual.
- 10. Refer manufacturers manuals.



TADANO TR-500M-3 HYDRAULIC ROUGH TERRAIN CRANE
TOTAL RATED LOAD IN KILOGRAMS

THIS DOCUMENT SHOULD BE READ IN CONJUNCTION WITH THE A.M.L.

JIB: Outriggers Fully Extended (7.3 m) - 360°												
C	7.8m						12.5m					
D	5°		25°		45°		5°		25°		45°	
E(°)	B(m)	M	B(m)	M	B(m)	M	B(m)	M	B(m)	M	B(m)	M
83	6.6	3.5	9.0	2.4	10.7	1.6	8.0	2.5	11.5	1.4	14.5	0.8
76	13.6	3.5	15.5	2.4	16.8	1.6	15.9	2.5	18.7	1.4	21.2	0.8
74	15.3	3.25	17.3	2.2	18.4	1.5	17.9	2.25	20.5	1.4	22.9	0.8
72	17.0	2.95	18.8	2.1	20.1	1.48	19.7	2.05	22.4	1.3	24.7	0.8
70	18.7	2.65	20.6	1.95	21.6	1.45	21.6	1.9	24.2	1.25	26.4	0.8
68	20.3	2.4	22.3	1.85	23.2	1.43	23.4	1.75	25.9	1.2	28.0	0.8
65	22.6	2.1	24.5	1.7	25.3	1.4	25.9	1.55	28.3	1.1	30.2	0.77
60	26.5	1.7	28.1	1.45	28.8	1.3	30.1	1.3	32.2	0.95	33.8	0.74
55	29.8	1.2	31.3	1.1	31.8	1.0	33.8	1.0	35.8	0.85	37.1	0.72
50	32.7	0.65	34.1	0.55	34.4	0.5	36.9	0.5	38.7	0.43	39.6	0.4
a (°)	49 ~ 83											

- B = Working radius
- C = Jib length
- D = Jib offset
- E = Boom angle
- M = Total rated loads
- A = Boom angle range (for the unladen condition)



TADANO TR-500M-3 HYDRAULIC ROUGH TERRAIN CRANE
TOTAL RATED LOAD IN KILOGRAMS

THIS DOCUMENT SHOULD BE READ IN CONJUNCTION WITH THE A.M.L.

JIB: Outriggers Middle Extended (6.7 m) – Over sides												
C	7.8m						12.5m					
D	5°		25°		45°		5°		25°		45°	
E(°)	B(m)	M	B(m)	M	B(m)	M	B(m)	M	B(m)	M	B(m)	M
83	6.6	3.5	9.0	2.4	10.7	1.6	8.0	2.5	11.5	1.4	14.5	0.8
76	13.6	3.5	15.5	2.4	16.8	1.6	15.9	2.5	18.7	1.4	21.2	0.8
74	15.3	3.25	17.3	2.2	18.4	1.5	17.9	2.25	20.5	1.4	22.9	0.8
72	17.0	2.95	18.8	2.1	20.1	1.48	19.7	2.05	22.4	1.3	24.7	0.8
70	18.7	2.65	20.6	1.95	21.6	1.45	21.6	1.9	24.2	1.25	26.4	0.8
68	20.3	2.4	22.3	1.85	23.2	1.43	23.4	1.75	25.9	1.2	28.0	0.8
65	22.6	2.1	24.5	1.7	25.3	1.4	25.9	1.55	28.3	1.1	30.2	0.77
60	26.4	1.6	28.1	1.45	28.8	1.3	30.1	1.3	32.2	0.95	33.8	0.74
55	29.6	0.9	31.2	0.8	31.7	0.75	33.6	0.75	35.6	0.65	37.0	0.55
53	30.8	0.65	32.3	0.6	32.7	0.55	34.9	0.55	36.8	0.5	38.1	0.4
a (°)	52 ~ 83											

B = Working radius
C = Jib length
D = Jib offset
E = Boom angle
M = Total rated loads
A = Boom angle range (for the unladen condition)



TADANO TR-500M-3 HYDRAULIC ROUGH TERRAIN CRANE
TOTAL RATED LOAD IN KILOGRAMS

THIS DOCUMENT SHOULD BE READ IN CONJUNCTION WITH THE A.M.L.

JIB: Outriggers Middle Extended (5.5 m) – Over sides												
C	7.8m						12.5m					
D	5°		25°		45°		5°		25°		45°	
E(°)	B(m)	M	B(m)	M	B(m)	M	B(m)	M	B(m)	M	B(m)	M
83	6.6	3.5	9.0	2.4	10.7	1.6	8.0	2.5	11.5	1.4	14.5	0.8
76	13.6	3.5	15.5	2.4	16.8	1.6	15.9	2.5	18.7	1.4	21.2	0.8
74	15.3	3.25	17.3	2.2	18.4	1.5	17.9	2.25	20.5	1.4	22.9	0.8
72	17.0	2.95	18.8	2.1	20.1	1.48	19.7	2.05	22.4	1.3	24.7	0.8
70	18.7	2.65	20.6	1.95	21.6	1.45	21.6	1.9	24.2	1.25	26.4	0.8
68	20.3	2.3	22.3	1.85	23.2	1.43	23.4	1.75	25.9	1.2	28.0	0.8
65	22.3	1.65	24.4	1.45	25.3	1.25	25.8	1.4	28.3	1.1	30.2	0.77
62	24.6	1.1	26.3	0.95	27.1	0.8	28.0	0.85	30.5	0.7	32.5	0.65
a (°)	61 ~ 83											

- B = Working radius
- C = Jib length
- D = Jib offset
- E = Boom angle
- M = Total rated loads
- A = Boom angle range (for the unladen condition)



TADANO TR-500M-3 HYDRAULIC ROUGH TERRAIN CRANE
TOTAL RATED LOAD IN KILOGRAMS

THIS DOCUMENT SHOULD BE READ IN CONJUNCTION WITH THE A.M.L.

JIB: Outriggers Minimum Extended (4.0 m) – Over sides												
C	7.8m						12.5m					
D	5°		25°		45°		5°		25°		45°	
E(°)	B(m)	M	B(m)	M	B(m)	M	B(m)	M	B(m)	M	B(m)	M
83	6.6	3.5	9.0	2.4	10.7	1.6	8.0	2.5	11.5	1.4	14.5	0.8
76	13.6	3.5	15.5	2.4	16.8	1.6	15.9	2.5	18.7	1.4	21.2	0.8
74	14.9	2.6	17.3	2.2	18.4	1.5	17.9	2.1	20.5	1.4	22.9	0.8
72	16.6	2.0	18.6	1.7	20.1	1.45	19.3	1.6	22.4	1.3	24.7	0.8
70	18.0	1.5	20.2	1.25	21.3	1.1						
a (°)	69 ~ 83						71 ~ 83					

- B = Working radius
- C = Jib length
- D = Jib offset
- E = Boom angle
- M = Total rated loads
- A = Boom angle range (for the unladen condition)



TADANO TR-500M-3 HYDRAULIC ROUGH TERRAIN CRANE
TOTAL RATED LOAD IN KILOGRAMS

THIS DOCUMENT SHOULD BE READ IN CONJUNCTION WITH THE A.M.L.

WITHOUT OUTRIGGERS

B (m)	Stationary						Creep (travelling at 1.6km/h or less)					
	9.7m Boom		16.0m Boom		22.3m Boom		9.7m Boom		16.0m Boom		22.3m Boom	
	F	G	F	G	F	G	F	G	F	G	F	G
3.0	20.0	12.5	15.0	10.0			14.5	8.0	10.5	6.5		
3.5	20.0	12.5	15.0	10.0			14.5	8.0	10.5	6.5		
4.0	20.0	11.0	15.0	10.0	11.0	5.5	14.5	8.0	10.5	6.5	8.0	4.5
4.5	18.0	9.0	15.0	8.5	11.0	5.5	12.9	6.8	10.5	6.5	8.0	4.5
5.0	16.0	7.4	15.0	7.0	11.0	5.5	11.5	5.8	10.5	5.3	8.0	4.5
5.5	14.3	6.2	14.0	5.7	11.0	5.3	10.3	4.8	10.5	4.4	8.0	4.1
6.0	12.8	5.2	13.0	4.8	11.0	4.4	9.3	4.0	10.0	3.7	8.0	3.55
6.5	11.7	4.35	12.0	4.05	10.0	3.7	8.6	3.35	9.3	3.15	8.0	3.05
7.0	10.8	3.7	11.0	3.4	9.2	3.0	7.9	2.8	8.5	2.7	7.4	2.55
8.0			9.0	2.3	7.7	2.0			7.0	1.85	6.4	1.65
9.0			7.0	1.3	6.4	1.15			5.9	1.1	5.4	0.95
10.0			5.7	0.6	5.4				4.8	0.5	4.5	
11.0			4.7		4.5				3.9		3.7	
12.0			4.0		3.8				3.3		3.1	
13.0			3.4		3.2				2.8		2.6	
14.0					2.7						2.2	
16.0					1.8						1.5	
18.0					1.05						0.85	
a (°)	0~78		40~78	25~78	61~78		0~78		40~78	25~78	61~78	

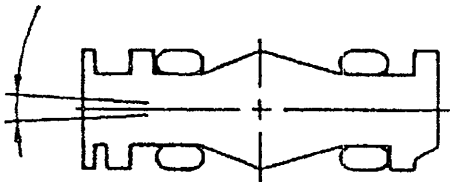
B = Working Radius
F = Front
G = 360°
A = Boom angle range (for the unladen condition)



PRECAUTIONS TO BE TAKEN WHEN THE OUTRIGGERS ARE NOT MOUNTED:

- 1. The total rated loads shown are for the case where the tyre air pressure on firm level ground is as specified (8.00kg/cm²) and the suspension-lock cylinder is retracted as much as possible. They include the weights of the slings and hooks (main hook: 460kg, 25t hook: 290kg, auxiliary hook: 100kg).
The values above the bold lines are based on the crane strength while those below are based on the crane stability. The foundation, working conditions, etc, should be taken into consideration for actual work.
- 2. Since the working radii are based on the actual values including the deflection of the boom and the tyres, operations should be performed in accordance with the working radii.
- 3. "Over front" crane operations should be performed only when "Over front" is displayed on the standard display. The boom must be kept inside a 2" area over front of the carrier when performing "Over front" crane operations without the outriggers.

Approx. 2°



- 4. The chart below shows the standard number of part lines for each boom length. The load per line should not exceed 4.17t for the main winch and 4.0t for the auxiliary winch.

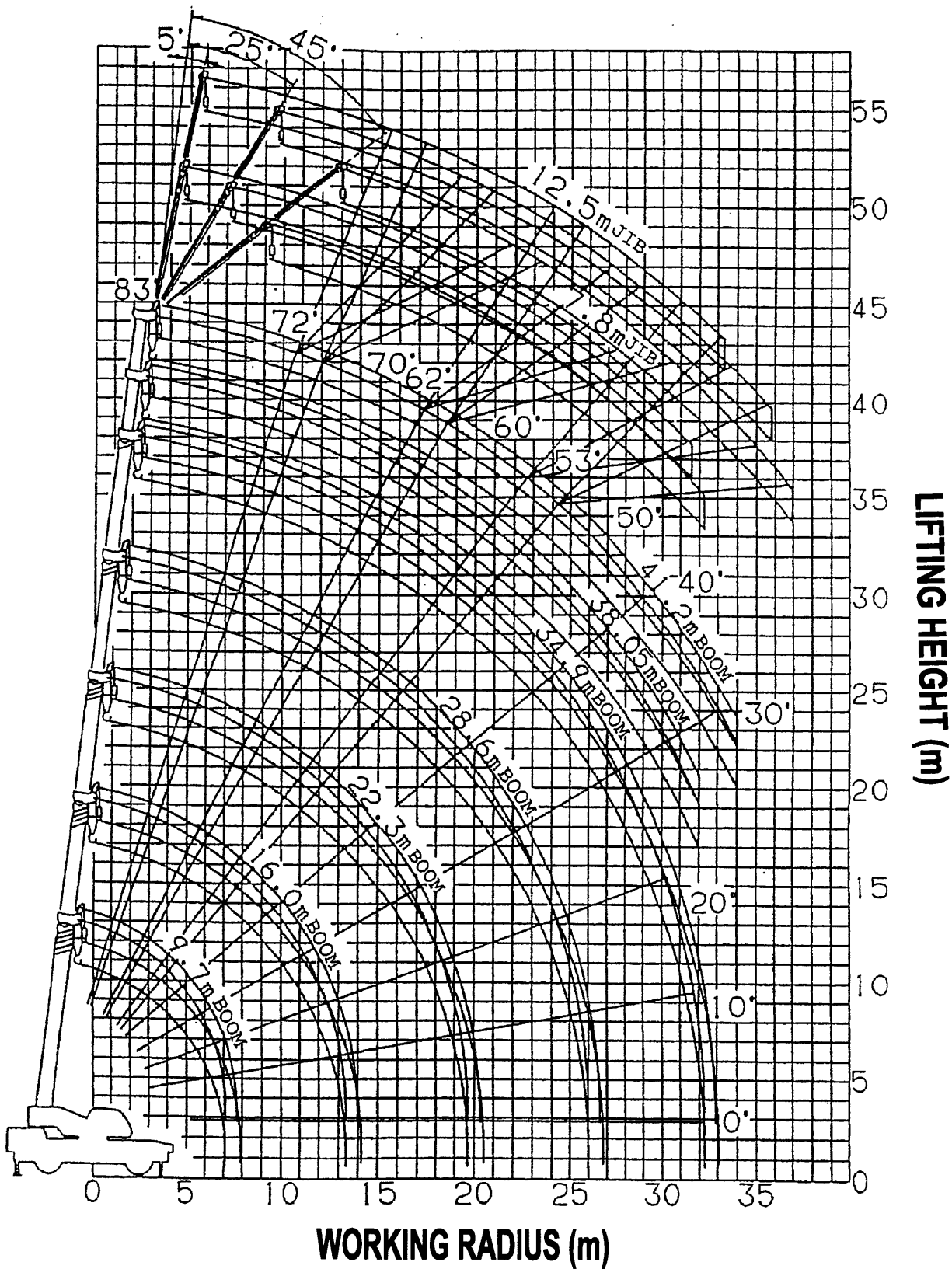
BOOM LENGTH	9.7m	16.0m	22.3m	Single top
NO. OF PART LINES	12	8	5(6)	1

The value in () is for a 25 tonne hook.

- 5. The total rated load for the single top shall be the value obtained by subtracting the weight of the hook mounted to the boom from the total rated load of the boom and must not exceed 4.0t.
- 6. Free-fall operations should not be performed without outriggers. Booms over 22.3m in length and jibs should not be used without outriggers.
- 7. The "Drive Mode Selection" switch should be set to "4-wheel-Lo" for creeping while hoisting a load.
- 8. When creeping while hoisting a load, the swing brake should be applied, the load should be kept as close to the ground as possible but not touching the ground and the speed should be kept at 1.6km/h or less. In particular, any abrupt steering, starting or braking must be avoided.
- 9. Crane operations should not be performed when creeping while hoisting a load.



TADANO TR-500M-3 HYDRAULIC ROUGH TERRAIN CRANE
WORKING RADIUS – LIFTING HEIGHT



NOTES:

1. The deflection of the boom is not incorporated in the figure above.
2. The figure above is for the case when the outriggers are fully extended (360°)