TD-25

TADANO

GR-700EXL

DATA FOR OPERATION

GR-700EXL SPECIFICATIONS

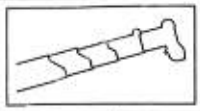
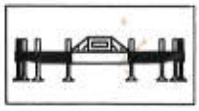
SUPERSTRUCTURE

Model	: GR-700EXL
Capacity	: 70,000kg at 3.0m
Boom Length	: 11.5m to 44.0m
	: (5 sections)
Jib Length	: 9.9m, 17.7m
	: (3.5°, 25°, 45° offset)
Single Top Length	: 0.7m (18° offset)
Available Speeds	
Boom Extension	: 32.5m / 145s
Boom Elevation	: −2° to 80° / 77s
Single Line Speed	
Main Winch	: 143m/min at the 4th layer
Aux. Winch	: 125m/min at the 2nd layer
Swing	: 2.3min^{-1}{rpm}
Outrigger Extended Width	: Maximum 7.2m
	: Middle 6.7m, 5.5m
	: Minimum 2.8m
Outrigger Float Size	: ϕ0.5m (0.2m^2)
Max. Load on Outrigger Float	: 510kN (52,000kg)
Tail Swing Radius	: 4.12m
Wire Rope Main Winch	: 19mm diameter 247m length
Aux. Winch	: 19mm diameter 133m length

VEHICLE

Gross Vehicle Weight	: 48,100kg
Overall Length	: 14.230m
Overall Width	: 3.315m
Overall Height	: 3.800m
Wheelbase	: 3.950m
Tread	: 2.502m
Ground Clearance	: 0.44m (Outrigger Float)
Max. Speed	: 40km/h
Min. Turning Radius	
2-Wheel	: 11.9m
4-Wheel	: 6.7m
Drive System	: 4×4/4×2
Gradeability (tan θ)	: 57%
Tire Size	: 29.5-25-22PR
Tire Inflation	
Road Traveling	: 350kPa{3.5kgf/cm^2}
On Tire Operation	: 420kPa{4.2kgf/cm^2}

ISO GR-700EXL RATED LIFTING CAPACITIES

ON OUTRIGGERS FULLY EXTENDED 7.2m SPREAD
360° ROTATION (UNIT: x1000kg)

Load Radius (m)	Boom Length											
	∠°	11.5m	∠°	15.56m	∠°	19.62m	∠°	27.75m	∠°	35.87m	∠°	44.0m
3.0	68.9	70.0	74.9	47.0	78.0	40.0						
3.5	65.9	58.5	72.6	47.0	76.6	40.0						
4.0	63.1	53.6	71.0	47.0	75.3	40.0						
4.5	60.1	49.6	69.0	47.0	73.7	40.0	78.9	20.0				
5.0	57.1	45.2	66.6	43.2	72.2	37.5	77.8	20.0				
5.5	54.0	40.5	64.8	39.4	70.6	35.0	76.8	20.0				
6.0	50.6	36.3	62.6	35.9	69.1	33.0	75.8	20.0	79.5	14.0		
6.5	47.2	32.9	60.7	32.8	67.5	30.7	74.8	20.0	78.7	14.0		
7.0	43.5	30.0	58.2	30.0	65.9	28.3	73.7	20.0	77.9	14.0		
8.0	35.5	25.2	53.6	25.0	62.4	23.7	71.7	19.4	76.4	14.0	79.5	8.0
9.0	24.2	21.3	48.7	20.8	59.1	19.8	69.5	17.9	74.9	14.0	78.0	8.0
10.0			43.6	17.3	55.6	16.6	67.1	16.3	73.3	13.7	77.0	8.0
11.0			37.8	14.5	51.6	14.0	64.9	14.9	71.7	12.5	75.9	8.0
12.0			30.4	12.3	47.6	11.7	62.6	13.3	69.9	11.5	74.7	8.0
13.0			20.9	10.3	43.2	9.9	60.1	11.4	68.3	10.6	73.4	8.0
14.0					38.6	8.5	57.4	9.8	66.5	9.8	72.1	8.0
16.0					26.7	6.1	52.2	7.4	62.9	8.0	69.4	7.4
18.0							46.4	5.7	59.0	6.4	66.5	6.4
20.0							40.1	4.4	54.7	5.1	63.4	5.2
22.0							32.6	3.4	50.6	4.0	60.3	4.3
24.0							23.1	2.5	45.9	3.1	57.1	3.5
26.0									40.8	2.4	53.6	2.8
28.0									35.5	1.9	49.9	2.2
30.0									29.0	1.4	46.2	1.7
32.0									21.2	1.0	42.3	1.3
A	0°								18°		32°	

Telescoping conditions (%)						
2nd boom	0	50	100	100	100	100
3rd boom	0	0	0	33	66	100
4th boom	0	0	0	33	66	100
Top boom	0	0	0	33	66	100

∠°: Loaded boom angle (°)

A : Minimum boom angle (°) for indicated length (no load)

NOTE : • The lifting capacity data stored in the AUTOMATIC MOMENT LIMITER (AML-L) is based on the standard number of parts of line listed in the chart.
• Standard number of parts of line for each boom length should be according to the following table.

Boom Length	11.5m	11.5m to 15.56m	15.56m to 19.62m	19.62m to 27.75m	27.75m to 44.0m	Single top Jib
Number of parts of line	16	12	10	6	4	1

WEIGHT REDUCTIONS FOR AUXILIARY LOAD HANDLING EQUIPMENT

Load Handling Equipment		
70ton, 8Sheave Hook Block (See Hook Block for actual weight)	850 (kg)	
40ton, 4Sheave Hook Block (See Hook Block for actual weight)	470 (kg)	
Aux. Hook (See Hook for actual weight)	150 (kg)	

	Lifting from Main Boom with							
#1	Base and/or Top Jib stowed on base boom						0 (kg)	
	Single Top stowed on top boom						0 (kg)	
	Single Top erected but not used						0 (kg)	Fig. 1
	9.9m Base Jib erected but not used						(kg)	Fig. 2
	Boom Length	11.5m	15.56m	19.62m	27.75m	35.87m	44.0m	
		9,100	6,400	6,000	3,700	3,000	2,200	
	9.9m Base Jib erected but not used + Aux. Hook on Top Jib						(kg)	Fig. 3
	Boom Length	11.5m	15.56m	19.62m	27.75m	35.87m	44.0m	
		9,500	6,800	6,500	4,000	3,300	2,400	
	17.7m Base and Top Jib erected but not used						(kg)	Fig. 4
	Boom Length	11.5m	15.56m	19.62m	27.75m	35.87m	44.0m	
		10,100	7,600	7,400	4,600	3,900	2,800	
	17.7m Base and Top Jib erected but not used + Aux. Hook on Top Jib						(kg)	Fig. 5
	Boom Length	11.5m	15.56m	19.62m	27.75m	35.87m	44.0m	
		10,700	8,200	8,200	5,100	4,300	3,100	
	Lifting from 9.9m Base Jib with							
	7.8m Top Jib erected but not used						Prohibited	
	7.8m Top Jib stowed on 9.9m Base Jib						Prohibited	


Fig. 1


Fig. 2


Fig. 3


Fig. 4

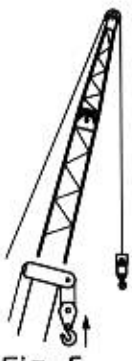


Fig. 5

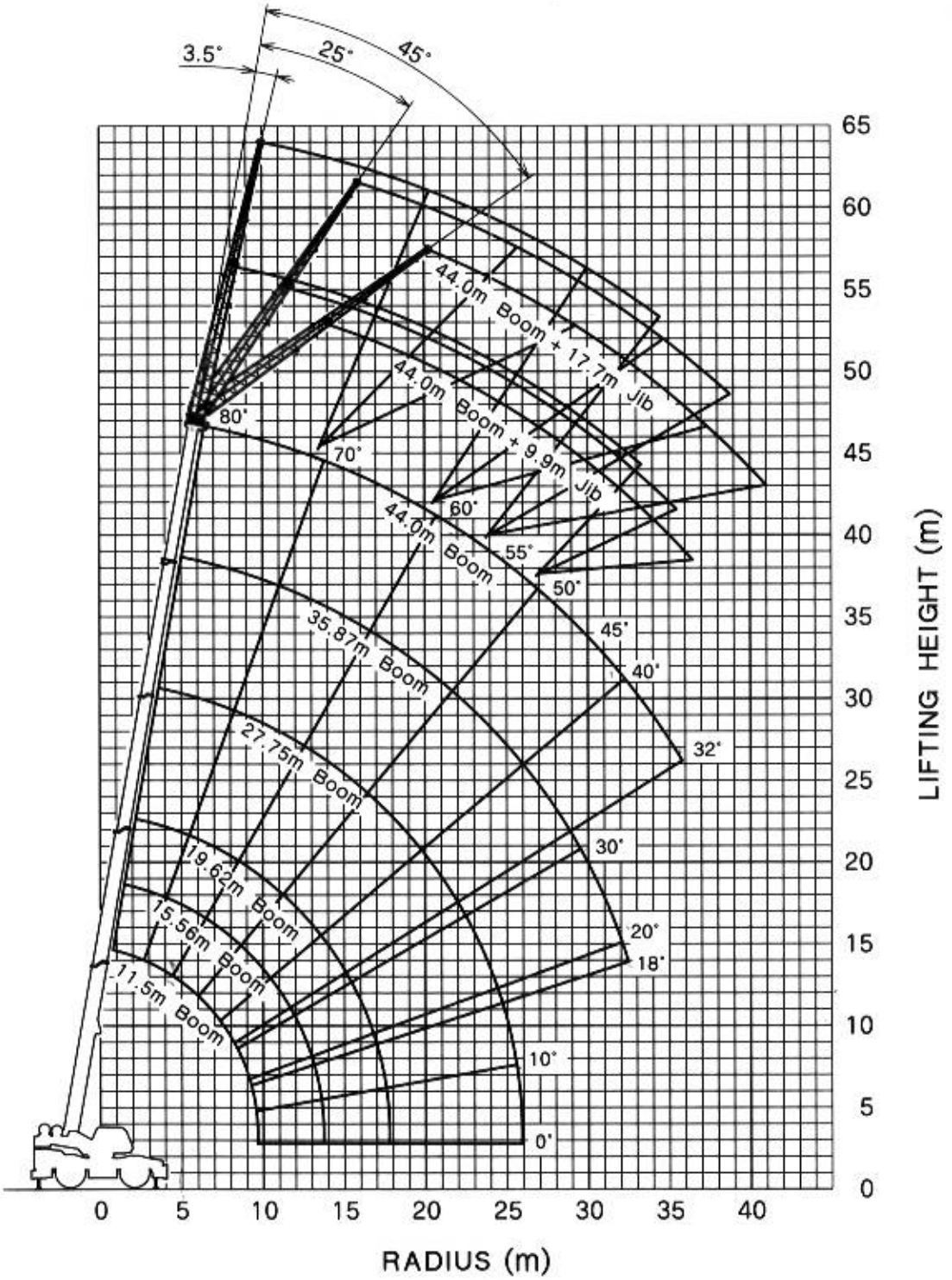
Note * Capacity deductions are for TADANO supplied equipment only.

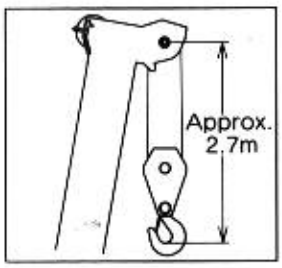
* When lifting from Jib, deduct total weight of all load handling devices reeved on Main Boom nose directly from Jib capacity. (#2)

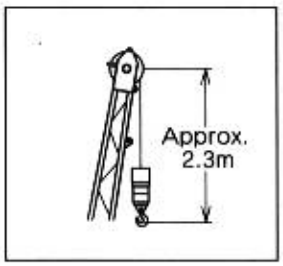
#1. Correct state of Jib, equipped or removed, should be inputted into the LOAD MOMENT INDICATOR (AML-L) by Jib state key switch.

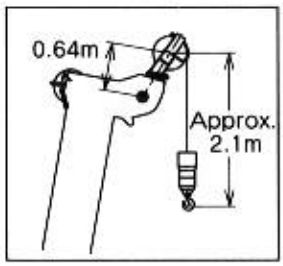
#2. The winch which is lifting load should be defined in the AUTOMATIC MOMENT LIMITER (AML-L) by main winch/auxiliary winch selector switch.

GR-700EXL WORKING RANGE CHART

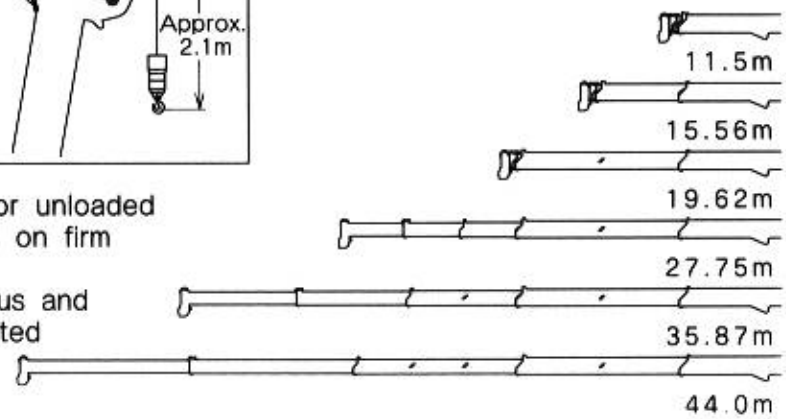






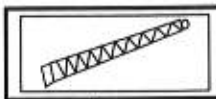
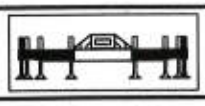


Boom Length



NOTE: 1. Boom and jib geometry shown are for unloaded condition and machine standing level on firm supporting surface.
Boom deflection and subsequent radius and boom angle change must be accounted for when applying load to hook.

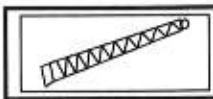
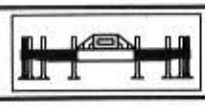
ISO GR-700EXL RATED LIFTING CAPACITIES

ON OUTRIGGERS FULLY EXTENDED 7.2m SPREAD
360° ROTATION

Boom Angle in Degree	Boom Length (m) 44.0m Boom + 9.9m Jib					
	3.5° Tilt		25° Tilt		45° Tilt	
	R	W	R	W	R	W
80°	9.8	4.5	13.7	4.0	16.1	3.4
75°	15.1	4.5	18.7	3.9	20.3	3.3
70°	20.0	4.4	23.0	3.4	24.4	3.0
65°	24.3	3.6	27.2	3.0	28.5	2.7
60°	28.1	2.4	30.9	2.4	32.0	2.2
55°	31.8	1.6	34.1	1.5	35.1	1.5
50°	35.2	1.0	37.1	1.0	37.9	0.9

Boom Angle in Degree	Boom Length (m) 44.0m Boom + 17.7m Jib					
	3.5° Tilt		25° Tilt		45° Tilt	
	R	W	R	W	R	W
80°	12.5	2.7	18.3	1.7	22.1	1.0
75°	18.6	2.7	23.7	1.7	27.1	1.0
70°	24.2	2.6	28.8	1.7	31.6	1.0
65°	29.2	2.2	33.6	1.7	35.7	1.0
60°	33.5	1.7	37.8	1.5	39.4	1.0
55°	37.4	1.1	41.3	0.9	43.0	0.9

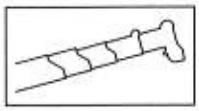
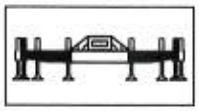
ON OUTRIGGERS FULLY EXTENDED 7.2m SPREAD
360° ROTATION

Boom Angle in Degree	Boom Length (m) 35.87m Boom + 9.9m Jib					
	3.5° Tilt		25° Tilt		45° Tilt	
	R	W	R	W	R	W
80°	8.0	5.6	11.6	5.0	13.8	3.8
75°	12.2	5.6	15.5	4.5	17.5	3.6
70°	16.3	5.5	19.1	4.0	20.9	3.4
65°	20.0	4.5	22.6	3.5	24.1	3.0
60°	23.4	3.8	25.8	3.1	27.1	2.8
55°	26.7	2.8	28.8	2.5	29.9	2.6
50°	29.5	2.0	31.5	1.8	32.4	1.9
45°	32.2	1.4	34.0	1.3	34.6	1.4
40°	34.7	1.0	36.2	0.9		

Boom Angle in Degree	Boom Length (m) 35.87m Boom + 17.7m Jib					
	3.5° Tilt		25° Tilt		45° Tilt	
	R	W	R	W	R	W
80°	10.3	3.6	16.5	2.4	20.4	1.5
75°	15.2	3.6	21.1	2.4	24.4	1.5
70°	19.8	3.2	25.2	2.1	28.2	1.5
65°	24.2	2.7	29.1	1.9	31.6	1.5
60°	28.4	2.3	32.6	1.7	34.7	1.5
55°	32.1	2.0	36.0	1.6	37.6	1.4
50°	35.4	1.4	39.0	1.2	40.1	1.1
45°	38.5	0.9				

R : Load Radius (m)
W : Rated Lifting Capacity (UNIT: ×1000kg)

ISO GR-700EXL RATED LIFTING CAPACITIES

ON OUTRIGGERS MID EXTENDED 6.7m SPREAD
360° ROTATION (UNIT: ×1000kg)

Load Radius (m)	Boom Length											
	∠°	11.5m	∠°	15.56m	∠°	19.62m	∠°	27.75m	∠°	35.87m	∠°	44.0m
3.0	68.7	70.0	74.8	47.0	78.1	40.0						
3.5	65.9	58.5	72.9	47.0	76.6	40.0						
4.0	63.0	53.6	70.7	47.0	75.0	40.0						
4.5	59.9	49.6	69.0	47.0	73.7	40.0	78.8	20.0				
5.0	57.2	45.1	66.8	43.1	72.1	37.3	77.7	20.0				
5.5	54.0	40.3	64.8	39.1	70.5	34.8	76.8	20.0				
6.0	50.6	36.3	62.7	35.6	69.1	32.8	75.7	20.0	79.6	14.0		
6.5	47.4	32.8	60.6	32.3	67.5	30.7	74.8	20.0	78.7	14.0		
7.0	43.7	29.8	58.4	29.2	65.8	28.2	73.7	20.0	78.0	14.0		
8.0	35.5	24.8	53.7	23.2	62.5	22.8	71.6	19.2	76.4	14.0	79.5	8.0
9.0	24.2	19.1	48.7	18.4	59.0	18.0	69.4	17.7	75.0	14.0	78.4	8.0
10.0			43.7	14.9	55.3	14.6	67.1	15.8	73.3	13.7	77.0	8.0
11.0			37.8	12.4	51.5	12.0	64.7	13.7	71.6	12.5	75.8	8.0
12.0			30.8	10.5	47.5	10.0	62.4	11.6	69.9	11.5	74.7	8.0
13.0			20.8	8.8	43.2	8.4	60.0	10.0	68.1	10.4	73.4	8.0
14.0					38.5	7.1	57.4	8.6	66.5	9.3	72.2	8.0
16.0							51.9	6.5	62.9	7.3	69.4	7.3
18.0							46.2	5.0	58.9	5.6	66.5	6.0
20.0							40.0	3.8	54.6	4.3	63.3	4.8
22.0							32.7	2.9	50.3	3.3	60.1	3.7
24.0							23.3	2.1	45.7	2.5	56.7	2.9
26.0									40.6	1.9	53.2	2.3
28.0									35.0	1.3	49.7	1.7
30.0											45.9	1.2
A	0°								18°		32°	

Telescoping conditions (%)						
2nd boom	0	50	100	100	100	100
3rd boom	0	0	0	33	66	100
4th boom	0	0	0	33	66	100
Top boom	0	0	0	33	66	100

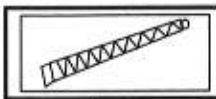
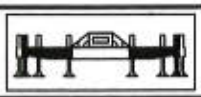
∠°: Loaded boom angle (°)

A : Minimum boom angle (°) for indicated length (no load)

NOTE : • The lifting capacity data stored in the AUTOMATIC MOMENT LIMITER (AML-L) is based on the standard number of parts of line listed in the chart.
• Standard number of parts of line for each boom length should be according to the following table.

Boom Length	11.5m	11.5m to 15.56m	15.56m to 19.62m	19.62m to 27.75m	27.75m to 44.0m	Single top Jib
Number of parts of line	16	12	10	6	4	1

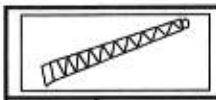
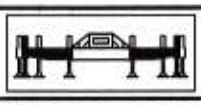
ISO GR-700EXL RATED LIFTING CAPACITIES

ON OUTRIGGERS MID EXTENDED 6.7m SPREAD
360° ROTATION

Boom Angle in Degree	Boom Length (m) 44.0m Boom + 9.9m Jib					
	3.5° Tilt		25° Tilt		45° Tilt	
	R	W	R	W	R	W
80°	10.0	4.5	13.7	4.0	16.0	3.4
75°	15.1	4.5	18.7	3.9	20.3	3.3
70°	20.0	4.4	23.1	3.4	24.5	3.0
65°	24.2	3.3	27.1	3.0	28.5	2.7
60°	28.0	2.1	30.6	2.0	31.7	1.9
55°	31.6	1.3	34.0	1.2	34.8	1.2

Boom Angle in Degree	Boom Length (m) 44.0m Boom + 17.7m Jib					
	3.5° Tilt		25° Tilt		45° Tilt	
	R	W	R	W	R	W
80°	12.5	2.7	18.4	1.7	22.3	1.0
75°	18.6	2.7	23.7	1.7	27.1	1.0
70°	24.3	2.6	28.8	1.7	31.6	1.0
65°	29.2	2.2	33.4	1.6	35.7	1.0
60°	33.2	1.5	37.7	1.3	39.4	1.0

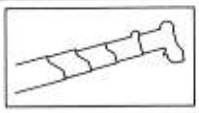
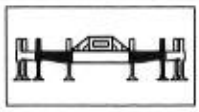
ON OUTRIGGERS MID EXTENDED 6.7m SPREAD
360° ROTATION

Boom Angle in Degree	Boom Length (m) 35.87m Boom + 9.9m Jib					
	3.5° Tilt		25° Tilt		45° Tilt	
	R	W	R	W	R	W
80°	8.0	5.6	11.6	5.0	13.8	3.8
75°	12.2	5.6	15.4	4.5	17.4	3.6
70°	16.2	5.5	19.1	4.0	20.9	3.4
65°	19.9	4.5	22.5	3.5	24.1	3.0
60°	23.4	3.7	25.8	3.1	27.1	2.8
55°	26.5	2.6	28.7	2.3	29.8	2.1
50°	29.4	1.8	31.4	1.6	32.2	1.5
45°	32.1	1.2	33.8	1.0	34.4	1.0

Boom Angle in Degree	Boom Length (m) 35.87m Boom + 17.7m Jib					
	3.5° Tilt		25° Tilt		45° Tilt	
	R	W	R	W	R	W
80°	10.3	3.6	16.5	2.4	20.3	1.5
75°	15.2	3.6	21.1	2.4	24.4	1.5
70°	19.8	3.2	25.2	2.1	28.2	1.5
65°	24.2	2.7	29.0	1.9	31.6	1.5
60°	28.3	2.3	32.6	1.7	34.7	1.5
55°	31.9	1.7	35.9	1.5	37.5	1.4
50°	35.3	1.1	38.8	1.0	40.0	0.9

R : Load Radius (m)
W : Rated Lifting Capacity (UNIT:×1000kg)

ISO GR-700EXL RATED LIFTING CAPACITIES

ON OUTRIGGERS MID EXTENDED 5.5m SPREAD
360° ROTATION (UNIT: x1000kg)

Load Radius (m)	Boom Length											
	∠°	11.5m	∠°	15.56m	∠°	19.62m	∠°	27.75m	∠°	35.87m	∠°	44.0m
3.0	69.1	66.3	74.8	47.0	78.2	40.0						
3.5	66.1	58.4	72.7	47.0	76.8	40.0						
4.0	63.2	51.2	71.0	47.0	75.2	40.0						
4.5	60.3	44.6	68.9	46.0	73.8	40.0	78.8	20.0				
5.0	57.1	39.1	66.9	38.7	72.2	34.5	77.8	20.0				
5.5	54.2	34.3	64.8	33.1	70.6	29.8	76.7	20.0				
6.0	50.8	30.1	62.6	28.8	68.9	26.0	75.7	20.0	79.5	14.0		
6.5	47.4	26.3	60.6	25.2	67.4	23.0	74.7	20.0	78.5	14.0		
7.0	44.0	23.0	58.3	22.0	65.7	20.5	73.6	19.8	77.9	14.0		
8.0	35.8	17.7	53.7	17.1	62.2	16.5	71.5	16.3	76.4	14.0	79.4	8.0
9.0	24.2	13.7	48.7	13.6	58.8	13.2	69.2	13.8	74.9	13.3	78.3	8.0
10.0			43.8	11.0	55.3	10.6	67.0	11.7	73.1	11.5	77.2	8.0
11.0			37.9	9.0	51.5	8.6	64.6	10.0	71.4	10.0	75.9	8.0
12.0			30.6	7.4	47.3	7.1	62.1	8.6	69.7	8.8	74.8	8.0
13.0			21.6	6.1	42.9	5.8	59.8	7.3	67.9	7.7	73.3	7.6
14.0					38.3	4.7	57.3	6.2	66.1	6.8	71.7	6.8
16.0							51.9	4.4	62.6	5.2	68.9	5.4
18.0							46.0	3.1	58.4	3.9	66.0	4.2
20.0							39.9	2.2	54.3	2.8	62.8	3.2
22.0							32.2	1.4	49.6	2.0	59.7	2.4
24.0									44.9	1.3	56.4	1.7
26.0											53.0	1.1
A	0°								18°		32°	

Telescoping conditions (%)						
2nd boom	0	50	100	100	100	100
3rd boom	0	0	0	33	66	100
4th boom	0	0	0	33	66	100
Top boom	0	0	0	33	66	100

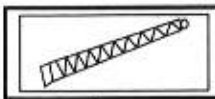
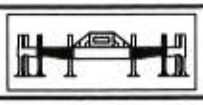
∠°: Loaded boom angle (°)

A : Minimum boom angle (°) for indicated length (no load)

NOTE : • The lifting capacity data stored in the AUTOMATIC MOMENT LIMITER (AML-L) is based on the standard number of parts of line listed in the chart.
• Standard number of parts of line for each boom length should be according to the following table.

Boom Length	11.5m	11.5m to 15.56m	15.56m to 19.62m	19.62m to 27.75m	27.75m to 44.0m	Single top Jib
Number of parts of line	16	12	10	6	4	1

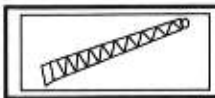
ISO GR-700EXL RATED LIFTING CAPACITIES

ON OUTRIGGERS MID EXTENDED 5.5m SPREAD
360° ROTATION

Boom Angle in Degree	Boom Length (m) 44.0m Boom + 9.9m Jib					
	3.5° Tilt		25° Tilt		45° Tilt	
	R	W	R	W	R	W
80°	10.0	4.5	13.7	4.0	16.1	3.4
75°	15.1	4.5	18.7	3.9	20.3	3.3
70°	19.6	3.6	22.9	3.0	24.4	2.9
65°	23.7	2.3	26.6	1.9	27.6	1.8
60°	27.6	1.3	30.1	1.0	30.8	1.0

Boom Angle in Degree	Boom Length (m) 44.0m Boom + 17.7m Jib					
	3.5° Tilt		25° Tilt		45° Tilt	
	R	W	R	W	R	W
80°	12.5	2.7	18.2	1.7	22.0	1.0
75°	18.7	2.7	24.0	1.7	27.1	1.0
70°	23.9	2.4	29.0	1.7	31.7	1.0
65°	28.4	1.4	33.3	1.3	35.8	1.0



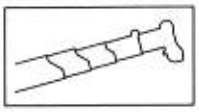
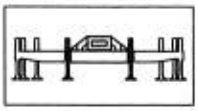

ON OUTRIGGERS MID EXTENDED 5.5m SPREAD
360° ROTATION

Boom Angle in Degree	Boom Length (m) 35.87m Boom + 9.9m Jib					
	3.5° Tilt		25° Tilt		45° Tilt	
	R	W	R	W	R	W
80°	8.0	5.6	11.6	5.0	13.8	3.8
75°	12.2	5.6	15.4	4.5	17.4	3.6
70°	16.2	5.0	19.2	4.0	20.9	3.4
65°	19.6	3.7	22.5	3.3	24.1	2.8
60°	23.0	2.4	25.5	2.2	26.8	1.9
55°	26.2	1.5	28.5	1.4	29.5	1.2

Boom Angle in Degree	Boom Length (m) 35.87m Boom + 17.7m Jib					
	3.5° Tilt		25° Tilt		45° Tilt	
	R	W	R	W	R	W
80°	11.0	3.6	16.5	2.4	20.4	1.5
75°	15.3	3.6	21.1	2.4	24.4	1.5
70°	19.8	3.2	25.2	2.1	28.2	1.5
65°	24.1	2.6	29.0	1.9	31.5	1.5
60°	27.9	1.6	32.4	1.4	34.6	1.2

R : Load Radius (m)
W : Rated Lifting Capacity (UNIT: ×1000kg)

ISO GR-700EXL RATED LIFTING CAPACITIES

ON OUTRIGGERS MIN EXTENDED 2.8m SPREAD
360° ROTATION (UNIT: x1000kg)

Load Radius (m)	Boom Length											
	∠°	11.5m	∠°	15.56m	∠°	19.62m	∠°	27.75m	∠°	35.87m	∠°	44.0m
3.0	69.1	38.9	74.8	36.1	78.1	35.2						
3.5	66.1	30.2	72.7	28.4	76.4	27.7						
4.0	63.2	24.2	70.8	22.8	74.9	22.2						
4.5	60.2	19.8	68.7	18.6	73.4	18.2	78.8	19.2				
5.0	57.3	16.5	66.7	15.5	71.8	15.1	77.6	16.4				
5.5	54.1	14.0	64.7	13.1	70.1	12.8	76.5	14.2				
6.0	50.8	12.0	62.5	11.2	68.5	10.9	75.5	12.4	79.5	13.2		
6.5	47.6	10.4	60.3	9.6	66.9	9.3	74.4	10.8	78.6	11.6		
7.0	44.0	9.1	58.1	8.3	65.3	8.0	73.3	9.5	77.6	10.3		
8.0	35.9	6.9	53.5	6.2	62.1	5.9	71.0	7.4	76.0	8.1	79.5	8.0
9.0	24.9	5.2	48.8	4.7	58.4	4.4	68.8	5.8	74.3	6.5	78.1	6.9
10.0			43.4	3.5	54.9	3.2	66.4	4.6	72.5	5.2	76.7	5.7
11.0			37.7	2.5	51.1	2.2	64.1	3.6	70.9	4.2	75.3	4.7
12.0			30.7	1.7	46.9	1.4	61.7	2.7	69.2	3.3	73.9	3.8
13.0							59.3	2.0	67.3	2.6	72.4	3.0
14.0							56.6	1.4	65.7	2.0	70.9	2.4
A	0°				38°		46°		54°		62°	

Telescoping conditions (%)						
2nd boom	0	50	100	100	100	100
3rd boom	0	0	0	33	66	100
4th boom	0	0	0	33	66	100
Top boom	0	0	0	33	66	100

∠°: Loaded boom angle (°)

A : Minimum boom angle (°) for indicated length (no load)

NOTE : • The lifting capacity data stored in the AUTOMATIC MOMENT LIMITER (AML-L) is based on the standard number of parts of line listed in the chart.
• Standard number of parts of line for each boom length should be according to the following table.

Boom Length	11.5m	11.5m to 15.56m	15.56m to 19.62m	19.62m to 27.75m	27.75m to 44.0m	Single top Jib
Number of parts of line	16	12	10	6	4	1

ISO GR-700EXL RATED LIFTING CAPACITIES

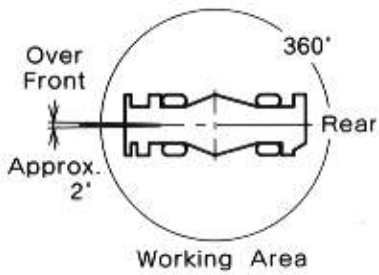
ON RUBBER STATIONARY (UNIT: ×1000kg)										
Load Radius (m)	Boom Length (m)									
	Over Front						360° Rotation			
	∠°	11.5m	∠°	19.62m	∠°	27.75m	∠°	11.5m	∠°	19.62m
3.0	69.0	33.0					68.7	22.2		
3.5	66.2	29.3					66.0	18.5		
4.0	63.2	26.1					63.2	14.7		
4.5	60.2	23.7					60.1	12.5		
5.0	57.4	21.5					57.1	10.5		
5.5	54.2	19.6					53.7	9.0		
6.0	50.9	17.0					50.5	7.5		
6.5	47.5	15.4	67.0	14.0			47.1	6.4	66.9	5.8
7.0	44.1	13.8	65.3	12.1			43.8	5.5	65.2	4.8
8.0	36.2	11.0	62.0	10.1			35.7	4.1	62.0	3.5
9.0	25.0	8.8	58.7	8.0			23.9	3.1	58.8	2.3
10.0			54.9	6.5	66.6	6.1				
11.0			51.4	5.1	64.3	5.2				
12.0			47.7	4.1	61.8	4.3				
13.0			43.7	3.2	59.3	3.6				
14.0			39.0	2.5	57.0	3.0				
16.0					52.3	2.0				
A	0°								18°	
Telescoping conditions (%)										
2nd boom	0		100		100		0		100	
3rd boom	0		0		33		0		0	
4th boom	0		0		33		0		0	
Top boom	0		0		33		0		0	

∠°: Loaded boom angle (°)

A : Minimum boom angle (°) for indicated length (no load)

NOTE : • The lifting capacity data stored in the AUTOMATIC MOMENT LIMITER (AML-L) is based on the standard number of parts of line listed in the chart.

• Standard number of parts of line for rubber operation should be according to the following table.



Boom Length (m)	Over Front			360° Rotation	
	11.5m	19.62m	27.75m	11.5m	19.62m
Number of parts of line (Single top)	8 (1)	4 (1)	4 (1)	6 (1)	4 (1)

ISO GR-700EXL RATED LIFTING CAPACITIES

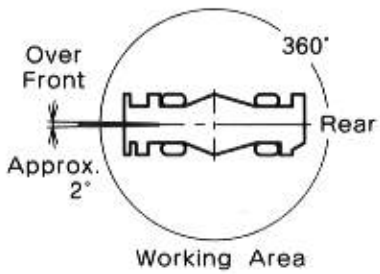
ON RUBBER CREEP (UNIT: ×1000kg)										
Load Radius (m)	Boom Length (m)									
	Over Front						360° Rotation			
	∠°	11.5m	∠°	19.62m	∠°	27.75m	∠°	11.5m	∠°	19.62m
3.0	69.0	25.5					68.9	17.1		
3.5	66.0	22.5					66.0	14.7		
4.0	63.1	20.0					63.3	12.7		
4.5	60.3	17.9					60.1	10.6		
5.0	56.9	16.3					57.3	8.8		
5.5	54.0	14.8					53.9	7.5		
6.0	50.6	13.5					50.8	6.5		
6.5	47.4	12.3	67.1	11.7			47.1	5.6	66.8	5.0
7.0	43.6	11.3	65.5	10.7			43.8	4.9	65.1	4.2
8.0	35.3	9.6	62.1	9.0			35.5	3.7	61.9	3.0
9.0	24.1	8.0	58.6	7.1			24.7	2.7	58.3	2.1
10.0			55.2	5.7	66.5	5.5				
11.0			51.4	4.6	64.2	4.8				
12.0			47.6	3.7	61.7	4.1				
13.0			43.8	2.9	59.5	3.5				
14.0			39.1	2.2	57.1	2.9				
16.0					52.2	2.0				
A	0°								18°	
Telescoping conditions (%)										
2nd boom	0		100		100		0		100	
3rd boom	0		0		33		0		0	
4th boom	0		0		33		0		0	
Top boom	0		0		33		0		0	

∠°: Loaded boom angle (°)

A : Minimum boom angle (°) for indicated length (no load)

NOTE : • The lifting capacity data stored in the AUTOMATIC MOMENT LIMITER (AML-L) is based on the standard number of parts of line listed in the chart.

• Standard number of parts of line for rubber operation should be according to the following table.



Boom Length (m)	Over Front			360° Rotation	
	11.5m	19.62m	27.75m	11.5m	19.62m
Number of parts of line (Single top)	6 (1)	4 (1)	4 (1)	6 (1)	4 (1)

WARNING AND OPERATING INSTRUCTIONS (I)

NOTES FOR LIFTING CAPACITIES

GENERAL

1. RATED LIFTING CAPACITIES apply only to the machine as originally manufactured and normally equipped by TADANO LTD.
   Modifications to the machine or use of optional equipment other than that specified can result in a reduction of capacity.
2. Construction equipment can be hazardous if improperly operated or maintained. Operation and maintenance of this machine must be in compliance with information in the operation, safety and maintenance manual supplied with machine. If these manuals are missing, order replacements through the distributor.

SET UP

1. Rated lifting capacities on the chart are the maximum allowable crane capacities and are based on the machine standing level on firm supporting surface under ideal job conditions. Depending on the nature of the supporting surface, it may be necessary to have structural supports under the outrigger floats or tires to spread the loads to a larger bearing surface.
2. For outrigger operation, outriggers shall be properly extended with tires free of supporting surface before operating crane.

OPERATION

1. Rated lifting capacities based on crane stability are according to ISO 4305.
2. Rated lifting capacities above blue lines in the chart are based on crane strength and those below, on its stability. They are based on actual load radius increased by boom deflection.
3. The weight of handling device such as hook blocks (850kg for 70t capacity, 470kg for 40t capacity, 150kg for 5.6t capacity), slings,etc., must be considered as part of the load and must be deducted from the lifting capacities.
4. Rated lifting capacities are based on freely suspended loads and make no allowance for such factors as the effect of wind, sudden stopping of loads, supporting surface conditions, inflation of tires, operating speeds, side loads, etc. Side pull on boom or jib is extremely dangerous. Such action can damage the boom, jib or swing mechanism, and lead to overturning of the crane.
5. When wind velocity is above 10m/sec, stop crane operation and stow the boom.
6. Rated lifting capacities at load radius shall not be exceeded. Do not tip the crane to determine allowable loads.
7. Do not operate at boom lengths, radii, or boom angle, where no capacities are shown. Crane may overturn without any load on the hook.
8. When boom length is between values listed, refer to the rated lifting capacities of the next longer and next shorter booms for the same radius. The lesser of the two rated lifting capacities shall be used.
9. When making lifts at a load radius not shown, use the next longer radius to determine allowable capacity.
10. Load per line should not exceed 5,600kg for main winch and auxiliary winch.
11. Check the actual number of parts of line with AUTOMATIC MOMENT LIMITER (AML-L) before operation. Maximum lifting capacity is restricted by the number of parts of line of AUTOMATIC MOMENT LIMITER (AML-L). Limited capacity is as determined from the formula,
    Single line pull for main winch (5,600kg) × number of parts of line.
12. The boom angle before loading should be greater to account for deflection.
    For rated lifting capacities, the loaded boom angle and the load radius is for reference only.
13. The 11.5m boom length capacities are based on boom fully retracted. If not fully retracted (less than 15.56m boom length), use the rated lifting capacities for the 15.56m boom length.
14. Extension or retraction of the boom with loads may be attempted within the limits of the RATED LIFTING CAPACITIES. The ability to telescope loads is limited by hydraulic pressure, boom angle, boom length, crane maintenance, etc.
15. For lifting capacity of single top, reduce the rated lifting capacities of relevant boom according to a weight reductions for auxiliary load handling equipment. Capacities of single top shall not exceed 5,600kg including main hook.
16. When base jib or top jib or both jib removing,Jib state switch select removed.
17. When erecting and stowing jib, be sure to retain it by hand or by other means to prevent its free movement.
18. Use "OVERWIND CUTOUT" disable switch when erecting and stowing jib and when stowing hook block. While the switch is pushed, the hoist does not stop, even when overwind condition occurs.
19. For boom length less than 44.0m and longer than 35.87m with jib, rated lifting capacities are determined by loaded boom angle only in the column headed "44.0m boom + jib".
    For boom length less than 35.87m with jib, rated lifting capacities are determined by loaded boom angle only in the column headed "35.87m boom + jib". For angles not shown, use the next lower loaded boom angle to determine allowable capacity.
20. When lifting a load by using jib (aux. winch) and boom (main winch) simultaneously, do the following:
    • Enter the operation status as jib operation, not as boom operation.
    • Before starting operation, make sure that mass of load is within rated lifting capacity for jib.
21. Crane operation is prohibited without full counterweight (7,900kg) installed. Outriggers shall be extended a minimum of 6.7m spread when installing or removing removable counterweight.
22. Traveling on road in a special steering mode (four-wheel steering, four-wheel sideways steering, etc.) is very dangerous, and must be strictly avoided. Drive the machine in two-wheel steering mode only. Special steering modes should only be used for low speed travel within work sites.

DEFINITIONS

1. Load Radius: Horizontal distance from a projection of the axis of rotation to supporting surface before loading to the center of the vertical hoist line or tackle with load applied.
2. Loaded Boom Angle: The angle between the boom base section and the horizontal, after lifting the rated lifting capacity at the load radius.
3. Working Area: Area measured in a circular arc about the centerline of rotation.
4. Freely Suspended Load: Load hanging free with no direct external force applied except by the hoist line.
5. Side Load: Horizontal side force applied to the lifted load either on the ground or in the air.

WARNING AND OPERATING INSTRUCTIONS (Ⅱ)

NOTES FOR ON RUBBER LIFTING CAPACITIES

1. Rated lifting capacities on rubber based on crane stability are according to ISO 4305.
2. Rated lifting capacities shown in the chart are based on condition that crane is set on firm level surfaces with axle oscillation lockout applied. Those above blue lines are based on tire capacity and those below, on crane stability. They are based on actual load radius increased by tire deformation and boom deflection.
3. If the axle oscillation lockout cylinders contain air, the axle will not be locked completely and rated lifting capacities may not be obtainable. Bleed the cylinders according to the operation safety and maintenance manual.
4. Rated lifting capacities are based on proper tire inflation, capacity and condition. Damaged tires are hazardous to safe operation of crane.
5. Tires shall be inflated to correct air pressure.

Tires	Air Pressure
29.5-25 22PR	0.41MPa (4.2kgf/cm)^2

6. Over front operation shall be performed within 2 degrees in front of chassis. When boom is out of 2 degrees in front of chassis, 360° capacities are effective.
7. On rubber lifting with "jib" is not permitted. Maximum permissible boom length is 27.75m.
8. When making lift on rubber stationary, set parking brake.
9. When a load is lifted in the front position and then swung to the side area, make sure that the value of the AML is below 360° lifting capacity.
10. Do not operate the crane while carrying the load.
11. Creep is motion for crane not to travel more than 60m in any 30 minute period and to travel at the speed of less than 1.6km/h.
12. For creep operation, set drive select switch to "4-WHEEL(Lo)" and set gear shift lever to "1" .

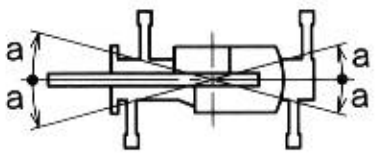
NOTES FOR AUTOMATIC MOMENT LIMITER (AML-L)

1. Before starting to operate crane, be sure to perform a pre-operational check of AML.
2. Set AML select keys in accordance with the actually operating crane conditions and don't fail to make sure, before crane operation, that indication by symbols are correct.
3. When operating crane on outriggers:
   - Set "P.T.O." switch to "ON".
   - Press the outrigger mode select key to register for the outrigger operation. Press the set key, then the outrigger mode indicative symbol changes from flickering to lighting.
   - Press the boom mode select key to register the boom mode, then the boom mode indicative symbol changes from lighting to flickering. Each time the boom mode select key is pressed, the mode changes. Press the set key to select the status that corresponds to the actual state of the boom, then the boom mode indicative symbol changes from flickering to lighting.
   - When erecting and stowing jib, select the status of jib set (Jib state indicative symbol flicker).
4. When operating crane on rubber:
   - Set "P.T.O." switch to "ON".
   - Press the outrigger mode select key. The on-tire mode indicative symbol comes on. Each time the outrigger mode select key is pressed the mode changes. Select the creep operation, the on-tire mode indicative symbol flicker.
   - Press the boom mode select key to register the boom mode.

   However, pay attention to the following.
   (1) For stationary operation.
      - The front capacities are attainable only when the over front position symbol comes on. When the boom is more than 2 degrees from centered over front of chassis, 360° capacities are in effect.
      - When a load is lifted in the front position and then swung to the side area, make sure the value of the AUTOMATIC MOMENT LIMITER (AML-L) is below the 360° lifting capacity.

   (2) For creep operation.
      - The creep capacities are attainable only when boom is in the straight forward position of chassis and the over front position symbol is on. If boom is not in the straight forward position of chassis, never lift load.
5. This machine is equipped with an automatic swing stopping device. (For the details, see Operation Maintenance Manual.) But, opetate very carefully because the sutomatic swing stop does not work in the following cases.
   - When the "SWING STOP OVERRIDE" switch is turned on.
   - During on-tire operation.
   - When the "P.T.O." switch is set to "OVERRIDE" and the "OVERRIDE" key switch outside the cab is on.
6. During crane operation, make sure that the displays on front panel are in accordance with actual operating conditions.
7. The displayed values of AUTOMATIC MOMENT LIMITER (AML-L) are based on freely suspended loads and make no allowance for such factors as the effect of wind, sudden stopping of loads, supporting surface conditions, inflation of tire,operating speed, side loads etc.
   For safe operation, it is recommended when extending and lowering boom or swinging, lifting loads shall be appropriately reduced.
8. AUTOMATIC MOMENT LIMITER (AML-L) is intended as an aid to the operator. Under no condition should it be relied upon to replace use of capacity charts and operating instruction. Sole reliance upon AUTOMATIC MOMENT LIMITER (AML-L) aids in place of good operating practice can cause an accident. The operator must exercise caution to assure safety.
9. The lifting capacity for over-side area differs depending on the outrigger extension width. Work with the capacity corresponding to the extension width. The lifting capacities for over-front and over-rear areas are for "outriggers fully extended". However, the areas (angle a) differ depending on the outrigger extension width.

Extended Width	6.7m	5.5m	2.8m
Angle a°	30 (middle)	20 (middle)	5 (minimum)



JIB HANDLING INSTRUCTIONS (I)

NOTES FOR MOUNTING THE BASE JIB

1. Fully retract the boom and raise the boom to a 1.5~2° angle.
   WARNING: Keep the boom fully retracted while mounting the jib.Don't lower the boom to angle below 1°, or this action could cause the boom and jib to disengage and drop off.
   NOTICE: Hydraulic cylinder (X) (Y) can't be operated unless the boom is fully retracted.
2. Select the JIB SET status on the load moment indicator.
   WARNING: Never forget to select JIB SET status. The load moment indicator's control functions is deactivated when the JIB SET status is selected on the load moment indicator. Mount the jib carefully with no load on the crane.
3. Attach the tagline to the base jib head.
4. Remove the connecting pin (I), stowing pin (A) and set pin (E).
   WARNING: Make sure that either the stowing pin or pivot pin (G) is in position before starting any operation. Without these pins in position,the jib will drop off when an operation is started.
5. Swing the jib out away from the boom until it hits the stopper.
6. Insert the pivot pin (G).
7. Retract jib fixing cylinder (X) completely by operating switch (K).
   NOTICE: Jib offsetting cylinder(Y) can' t be operated unless jib fixing cylinder (X) is fully retracted.
8. Fully extend the jib offsetting cylinder by operating switch (L).
9. Remove the connecting pin (M) and swing the jib forward with tagline.
10. Insert the connecting pin (H) after making sure the pin (F) is locked.
11. Remove the tagline from the base jib.
12. Erect the mast sheave to upright position and insert the pin (O).
13. Connect the leads of the anti-two block device.

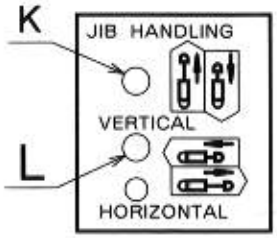
NOTES FOR MOUNTING THE BASE AND TOP JIB

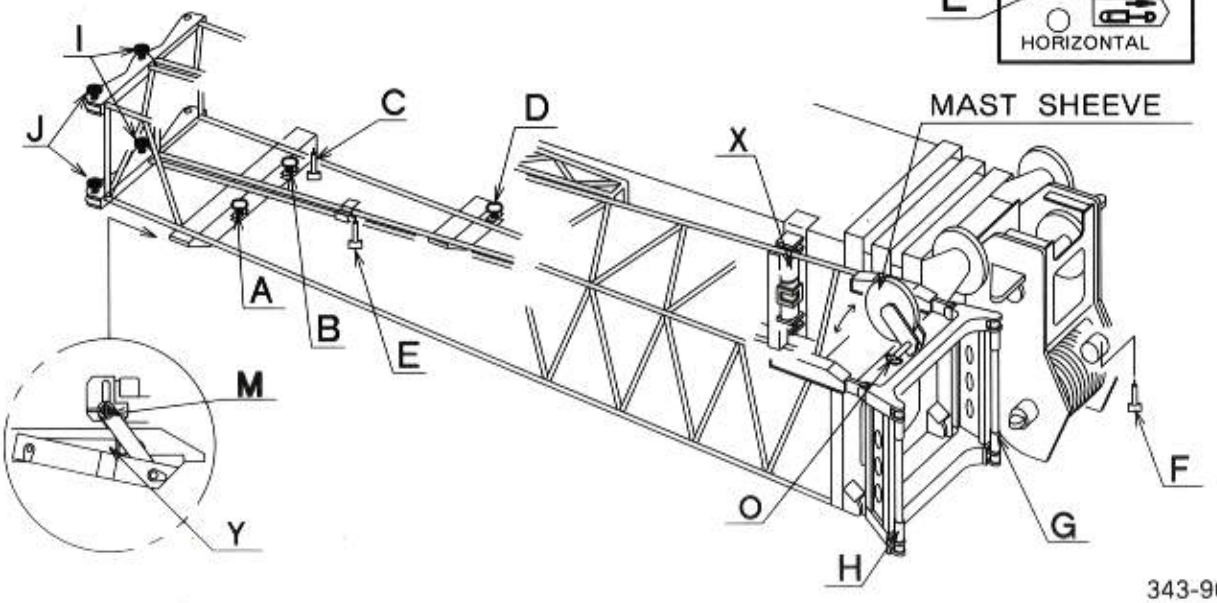
1. Perform the steps 1-3 described in the "MOUNTING THE BASE JIB" section.
   NOTICE: Strictly follow the warnings and notices in the "MOUNTING THE BASE JIB" section.
2. Remove the stowing pin (A), (B), (D) and set pin (C).
   WARNING: Make sure the connecting pin (I) is inserted, or the jib will drop off when the stowing pin (A), (B) and (D) are removed.
   Make sure that either the stowing pin or pivot pin (G) is in position before starting any operation. Without these pins in position, the jib will drop off when an operation is started.
3. Swing the jib out away from the boom until it hits the stopper.
4. Perform the steps 6-12 described in the "MOUNTING THE BASE JIB" section.
5. Attach the tagline to the top jib head.
6. Hold the tagline and remove the set pin (E) with the jib handle.
7. Swing the top jib forward and insert the connecting pin (J).
8. Connect the leads of the anti-twoblock device.

NOTES FOR CHANGING THE JIB OFFSET ANGLE

1. Select the JIB SET status on the load moment indicator.
2. Remove the auxiliary hook block and attach the rope socket to the proper jib bracket.
3. Raise the jib to a point where the offset pin can be removed by hoisting up with the winch.
4. Reinsert the offset pin in the pin hole of desired offset angle.
5. Lower the jib slowly by hoisting down with the winch until the jib is held in place by the offset pin.

Jib mounting/stowing switch





JIB HANDLING INSTRUCTIONS (Ⅱ)

NOTES FOR STOWING THE BASE JIB

ılly retract the boom and raise the boom to a 1.5~2° angle. If the jib offset angle other than 3.5°, change its offset to 3.5° beforehand.

ARNING: Keep the boom fully retracted while stowing the jib. Don't lower the boom to angle below 1°, or this action could cause the boom and jib to disengage and drop off.

OTICE: Hydraulic cylinder (X) (Y) can't be operated unless the boom is fully retracted.

elect the JIB SET status on the load moment indicator.

ARNING: Never forget to select JIB SET status. The load moment indicator's control functions is deactivated when the JIB SET status is selected on the load moment indicator. Stow the jib carefully with no load on the crane.

ıy the mast sheave to stowed position.

ee the set pin (E) so that it can fix the base jib when the jib is stowed.

ttach the tagline to the base jib head.

emove the connecting pin (H) using the jib handle.

se the jib handle to pull the set pin (F) down. Lock the set pin (F) in place by rning clockwise.

ving the jib toward the boom until pin (M) connects the base jib.

ılly retract the jib offsetting cylinder by operating switch (L).

xtend jib fixing cylinder (X) completely by operating switch (K).

emove the pivot pin (G).

ARNING: Make sure that either the stowing pin or pivot pin (G) is in position before starting any operation. Without these pins in position, the jib will drop off when an operation is started.

emove the tagline from the base jib.

ush the jib toward the boom until the set pin (E) connects the base jib and top jib. sert the stowing pin (A) for the base jib. Insert the connecting pin (I) to connect e base jib and top jib.

NOTES FOR STOWING THE BASE AND TOP JIB

erform the steps 1-3 described in the "STOWING THE BASE JIB" section.

OTICE: Strictly follow the warnings and notices in the "STOWING THE BASE JIB" section.

ree the set pin (E) so that it can fix the top jib to the base jib. Also free the set n (C) so that it can fix the top jib to the boom.

emove the connecting pin (J) that connects the base jib and the top jib. Then stow it nto the stowage support.

ttach the tagline to the top jib head.

ull the tagline to stow the top jib onto the base jib. Then make sure that the et pin (E) connects the top jib and the base jib.

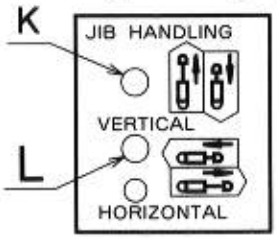
emove the tagline from the top jib and attach the tagline to the base jib head.

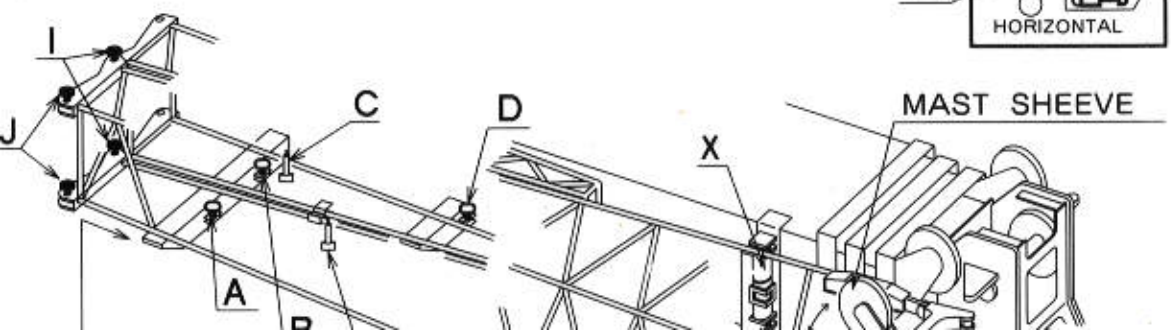
erform the steps 7-12 described in the "STOWING THE BASE JIB" section.

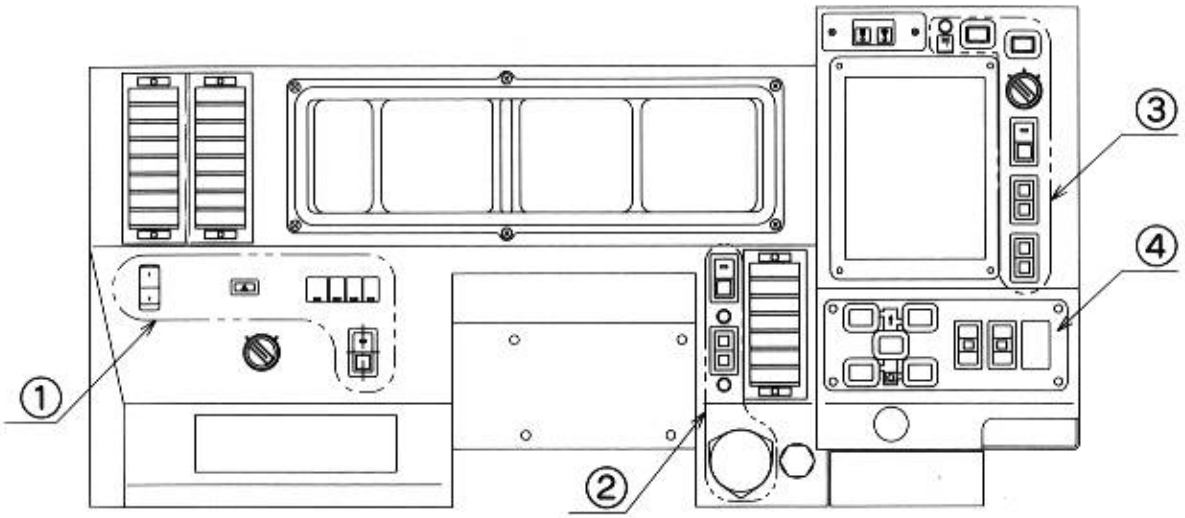
OTICE: Strictly follow the warnings and notices in the "STOWING THE BASE JIB" section.

ush the jib toward the boom until the set pin (C) connects the jib and the boom. sert the stowing pin (A) for the base jib. Insert the connecting pin (B) (D) to onnect the base jib and top jib.

Jib mounting/stowing switch





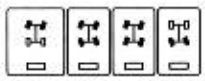


INSTRUMENT PANEL

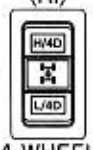
①

POWER WINDOW

HAZARD LAMP



STEERING MODE SELECT



DRIVE MODE SELECT

②

SWING FREE/LOCK SELECTOR

2M2D

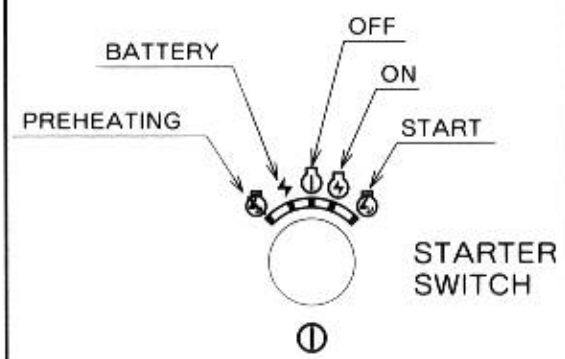
BOOM TELESCOPING OPERATION INDICATOR LAMP

TELESCOPING

BOOM TELESCOPING/ AUXILIARY HOIST CONTROL SELECTOR SWITCH

AUX.

AUXILIARY HOIST INDICATOR LAMP



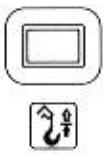
STARTER SWITCH

③

AUXILIARY HOIST INDICATOR LAMP

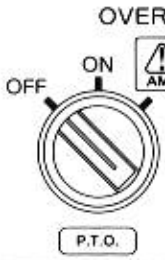
MAIN HOIST/ AUXILIARY HOIST SELECTOR SWITCH

SWING BRAKE

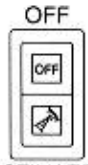


ANTI-TWO BLOCK DISABLE SWITCH

SWING STOP CANCEL SWITCH

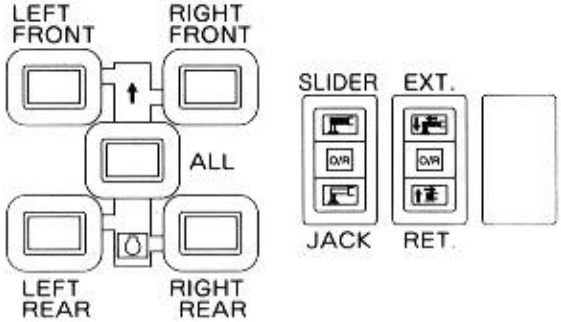


P.T.O.

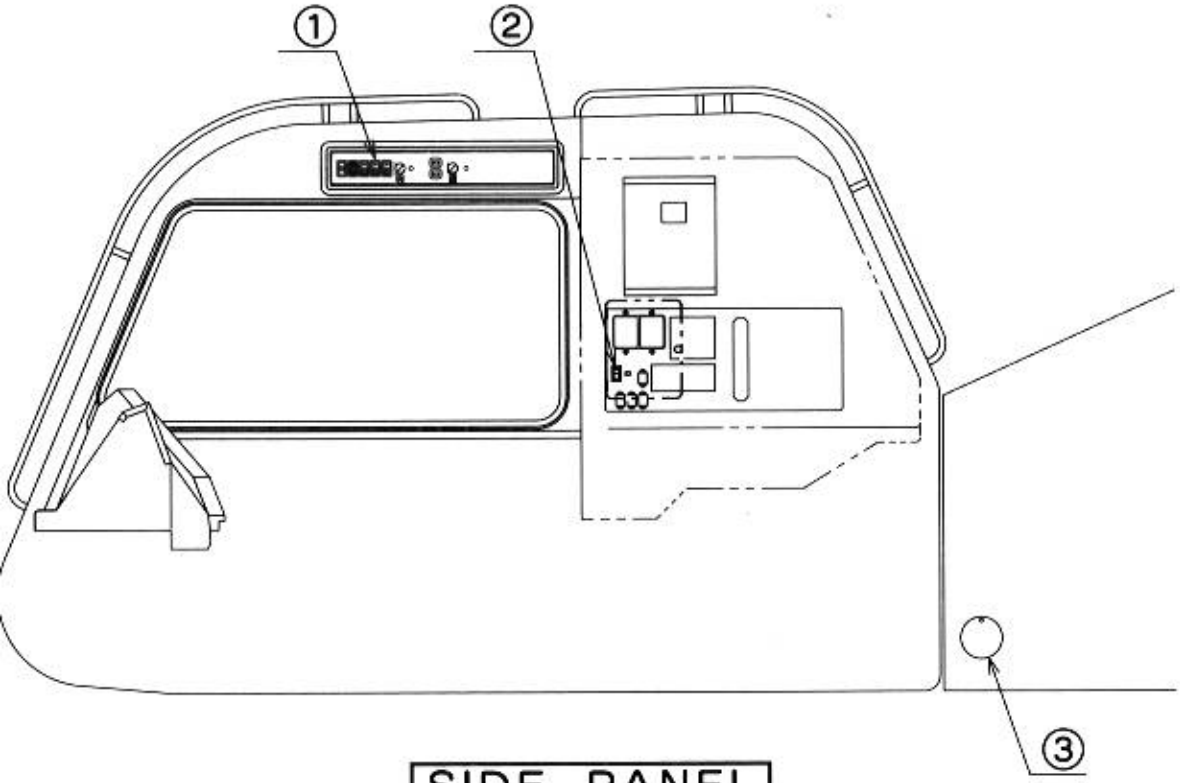


ELEVATION SLOW STOP CANCEL SWITCH

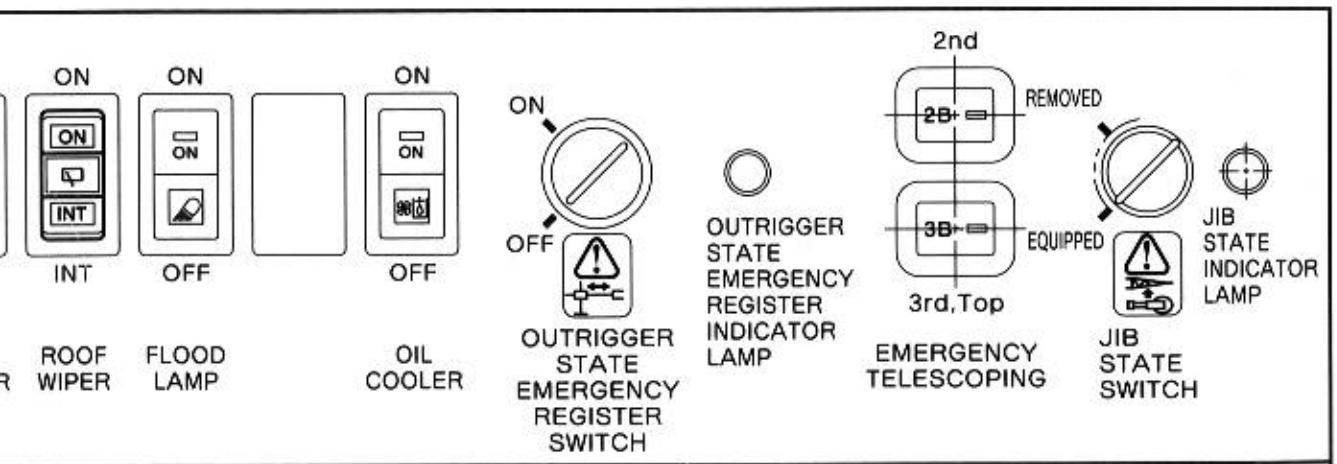
④

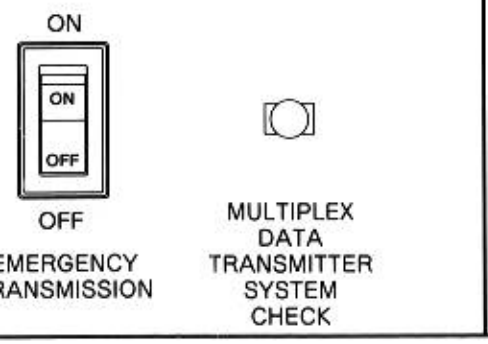


OUTRIGGER CONTROL



SIDE PANEL



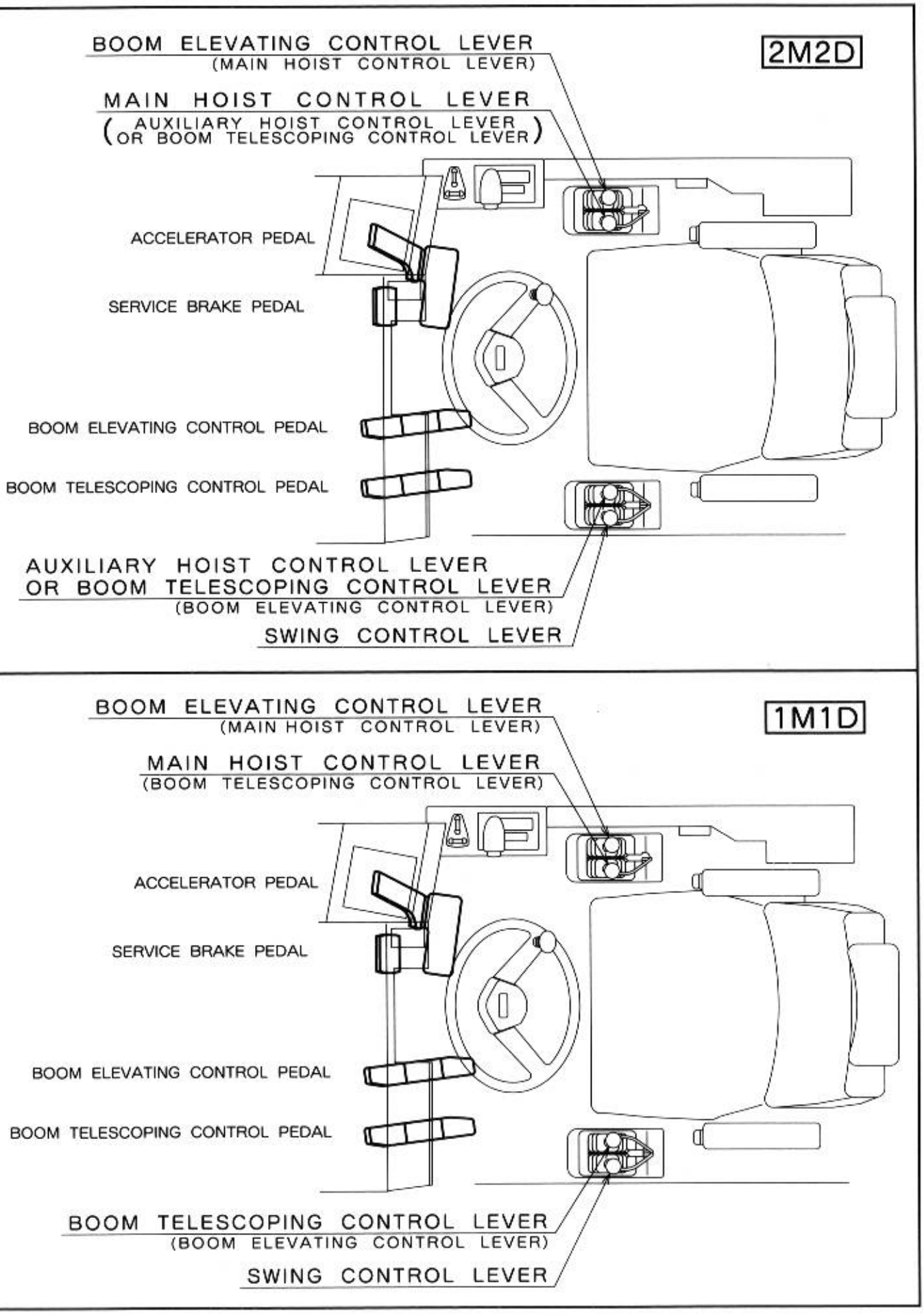


③

AML OVERRIDE

DISPOSITION OF CONTROL LEVER AND PEDAL

= ISO FORM =



NOTE: TADANO FORM shown in parentheses

SAFETY PARTS REQUIRING REGULAR REPLACEMENT

Some components of your machine use parts which wear with time. It is not always easy to determine when they should be replaced, even if the periodic inspection is performed as recommended. For safety, such parts must be replaced regularly. The following table gives the replacement intervals for the major safety parts. Contact your nearest TADANO distributor or dealer to have these parts replaced at the regular intervals.

Safety parts requiring regular replacement		replacement interval
CRANE	Boom telescoping wire ropes	4 years
CARRIER	Seals, O-rings and cups for brake valve	1 years
	Packing, O-rings and cups for air booster	
	Piston seals and dust seals for brake caliper	
	Brake fluid	
	Brake hoses	2 years
	Rubbers and packing in pneumatic equipment for brake, excepting above	
	Hoses for steering system	
	Packing and O-rings for steering cylinder	
	Packing and O-rings for steering system hydraulic circuit	
	Hydraulic hoses for traveling system	4 years