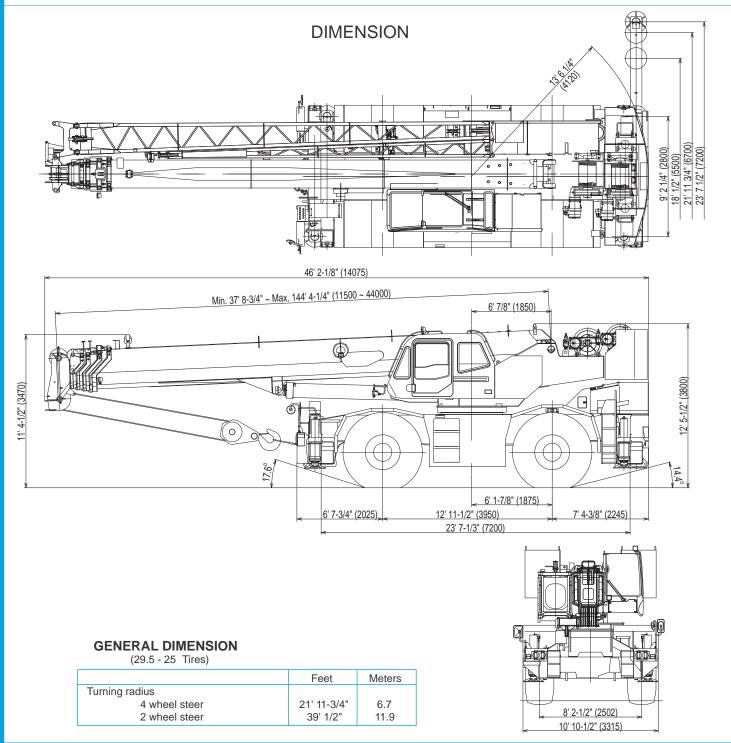


# **HYDRAULIC ROUGH TERRAIN CRANE**



## **CRANE SPECIFICATIONS**

#### BOOM

Five section full power synchronized telescoping boom, 37.7'~144.4'(11.5m~44.0m), of round hexagonal box construction with 7 sheaves, 17-5/16" (0.44m) root diameter, at boom head. The synchronization system consists of two telescope cylinders, an extension cable and retraction cable. Hydraulic cylinder fitted with holding valve. Two easily removable wire rope guards, rope dead end provided on both sides of boom head. Boom telescope sections are supported by wear pads both vertically and horizontally.

Extension speed 106' 7-1/2" in 145 seconds.

**BOOM ELEVATION** - By a double acting hydraulic cylinder with holding valve. Elevation -2.0°~80.7°, combination controls for hand or foot operation. Boom angle indicator. Automatic speed reduction and soft stop function. Elevation speed -2.0°~80.7° in 77 seconds.

**JIB** - Two stage bi-fold lattice type with 3.5°, 25° or 45° offset (tilt type). Single sheave, 15-5/8"(0.396m) root diameter, at the head of both jib sections. Stored alongside base boom section. Jib length is 32.5' (9.9m) or 58.1' (17.7m). Assist cylinders for mounting and stowing are controlled at right side of superstructure. Self stowing jib mounting pins.

AUXILIARY LIFTING SHEAVE (SINGLE TOP)

Single sheave, 15-5/8"(0.396m) root diameter. Mounted to main boom head for single line work (stowable).

ANTI-TWO BLOCK - Pendant type over-winding cut out device with audio-visual (FAILURE lamp/BUZZER) warning system.

#### SWING

Hydraulic axial piston motor driven through planetary swing speed reducer. Continuous 360° full circle swing on ball bearing turntable at 2.3rpm. Equipped with manually locked/released swing brake. A 360° positive swing lock for pick and carry and travel modes, manually engaged in cab. Twin swing System: Free swing or lock swing controlled by selector switch on front console.

#### HOIST

MAIN HOIST - Variable speed type with grooved drum driven by hydraulic axial piston motor through winch speed reducer. Power load lowering and raising. Equipped with automatic brake (neutral brake) and counterbalance valve. Controlled independently of aux hoist. Equipped with cable follower and drum rotation indicator.

**DRUM** - Grooved 15-3/4"(0.40m) root diameter x 22-3/4" (0.578m) wide. Wire rope: 797' of 3/4"diameter rope (243m of 19mm). Drum capacity: 1,096' (334m) 7 layers. Maximum line pull (permissible): 15,200lbs. (6,880kg)\*. Maximum line speed: 528FPM (161m/min).

**AUXILIARY HOIST** - Variable speed type with grooved drum driven by hydraulic axial piston motor through winch speed reducer. Power load lowering and raising. Equipped with automatic brake (neutral brake) and counterbalance valve. Controlled independently of main hoist. Equipped with cable follower and drum rotation indicator.

**DRUM** - Grooved 15-3/4"(0.40m) root diameter x 22-3/4" (0.578m) wide. Wire rope: 436' of 3/4"diameter rope (133m of 19mm). Drum capacity: 1,096' (334m) 7 layers. Maximum line pull (permissible): 15,200lbs. (6,880kg)\*. Maximum line speed: 413FPM (126m/min).

WIRE ROPE - Warrington seal wire, extra improved plow steel, preformed, independent wire rope core, right regular lay. 3/4"(19 mm) 6X37 class

#### **HOOK BLOCK**

6.2 ton (5.6 metric ton) - Weighted hook with swivel and safety latch, for 3/4"(19mm) wire rope.

#### HYDRAULIC SYSTEM

**PUMPS** - Two variable piston pumps for crane functions. Tandem gear pump for steering, swing and optional equipment. Powered by carrier engine. Pump disconnect for crane is engaged/ disengaged by rotary switch from operator's cab.

**CONTROL VALVES** - Multiple valves actuated by pilot pressure with integral pressure relief valves.

**RESERVOIR** - 195 gallon (740 lit.) capacity. External sight level gauge.

**FILTRATION** - 26 micron return filter, full flow with bypass protection, located inside of hydraulic reservoir. Accessible for easy replacement.

OIL COOLER - Air cooled fan type.

## **CAB AND CONTROLS**

Both crane and drive operations can be performed from one cab mounted on rotating superstructure.

Left side, 1 man type, steel construction with sliding door access and tinted safety glass windows opening at side. Door window is powered control. Windshield glass and roof window glass are shatter-resistant. Tilt-telescoping steering wheel. Adjustable control lever stands for swing, boom hoist, boom telescoping, auxiliary hoist and main hoist. Control lever stands can change neutral positions and tilt for easy access into cab. 3 way adjustable operator's seat with high back, headrest and armrest. Engine throttle knob. Foot operated controls: boom hoist, boom telescoping, service brake and engine throttle. Hot water cab heater and air conditignin (OPTIONAL).

Dash-mounted engine start/stop, monitor lamps, cigarette lighter ashtray, drive selector switch, parking brake switch, steering mode select switch, power window switch, pump engaged/ disengaged switch, swing brake switch, telescoping/auxiliary winch select switch, outrigger controls, main winch/auxiliary winch selector switch, swing stop cancel switch, slow elevation stop cancel switch and free swing / lock swing selector switch.

Instruments - Torque converter oil temperature, engine water temperature, air pressure, fuel, speedometer, tachometer and hour meter. Hydraulic oil pressure is monitored and displayed on the AML-L display panel. Tadano electronic LOAD MOMENT INDICATOR system (AML-L) including:

- Control lever lockout function
- Boom angle / boom length / jib offset angle / load radius / rated lifting capacities / actual loads read out
- Ratio of actual load moment to rated load moment indication
- · Boom position indicator
- · Outrigger state indicator
- Automatic Speed Reduction and Soft Stop function on boom elevation and swing
- Load radius / boom angle / tip height / swing range preset function
- · Working condition register switch
- · Warning buzzer
- · External warning lamp

## **CARRIER SPECIFICATIONS**

**TYPE** - Rear engine, left hand steering, driving axle 2-way selected type by manual switch, 4x2 front drive, 4x4 front and rear drive.

FRAME - High tensile steel, all welded mono-box construction.

**TRANSMISSION** - Electronically controlled full automatic transmission. Torque converter driving full powershift with driving axle selector. 6 forward and 2 reverse speeds, constant mesh.

3 speeds - high range - 2 wheel drive; 4 wheel drive 3 speeds - low range - 4 wheel drive

TRAVEL SPEED - 24 mph (39 km/h) ..... 29.5-25 22PR(OR) - 19 mph (30 km/h) ..... 29.5-25 28PR(OR)

**AXLE** - Front: Full floating type, steering and driving axle with planetary reduction. Rear: Full floating type, steering and driving axle with planetary reduction and non-spin rear differential.

**STEERING-** Hydraulic power steering controlled by steering wheel. Four steering modes available: 2 wheel front, 2 wheel rear, 4 wheel coordinated and 4 wheel crab.

TADANO AML-L monitors outrigger extended length and automatically programs the corresponding "RATED LIFTING CAPACITIES" table.

Operator's right hand console includes transmission gear selector and sight level bubble. Upper console includes working light switch, roof washer and wiper switch, oil cooler switch, emergency outrigger set up key switch, drum indicator switch, jib equipped/removed select switch, boom emergency telescoping switch (2nd and 3rd-top) and air conditioning control switch. Swing lock lever.

NOTE: Each crane motion speed is based on unladen conditions.

**SUSPENSION** - Front: Rigid mounted to frame. Rear: Pivot mounted with hydraulic lockout device.

**BRAKE SYSTEMS** - Service: Air over hydraulic disc brakes on all 4 wheels. Parking/Emergency: Spring applied-air released brake acting on input shaft of front axle. Auxiliary: Electropneumatic operated exhaust brake.

TIRES - 29.5-25 22PR(OR) or 29.5-25 28PR(OR)

**OUTRIGGERS** - Four hydraulic, beam and jack outriggers. Vertical jack cylinders equipped with integral holding valve. Each outrigger beam and jack is controlled independently from cab. Beams extend to 23' 7-1/2" (7.2 m) center-line and retract to within 10' 10-1/2" (3.315 m) overall width with floats. Outrigger jack floats are attached thus eliminating the need of manually attaching and detaching them. Controls and sight bubble located in superstructure cab. Four outrigger extension lengths are provided with corresponding "RATED LIFTING CAPACITIES" for crane duty in confined areas.

Min. Extension9' 2-1/4"(2.8m) center to centerMid. Extension18' 1/2"(5.5m) center to centerMid. Extension21' 11-3/4"(6.7m) center to centerMax. Extension23' 7-1/2"(7.2m) center to centerFloat size(Diameter)1' 7-11/16" (0.5m)

#### ENGINE

Model	Mitsubishi 6M60-TLA3B
Туре	Direct injection diesel
No. of cylinders	6
Combustion	4 cycle, turbo charged and after cooled
BoreXStroke, in.(mm)	4.646 X 4.528 (118X115)
Displacement, cu. in (liters)	460 (7.54)
Air inlet heater	24 volt preheat
Air cleaner	Dry type, replaceable element
Oil filter	Full flow with replaceable element
Fuel filter	Full flow with replaceable element
Fuel tank, gal.(liters)	79.2 (300), right side of carrier
Cooling	Liquid pressurized, recirculating by-pass
Oil filter Fuel filter Fuel tank, gal.(liters)	Full flow with replaceable element Full flow with replaceable element 79.2 (300), right side of carrier

Radiator	Fin and tube core, thermostat controlled
Fan, in.(mm)	Suction type, 6-blade, 23.6 (600) dia.
Starting	24 volt
Charging	24 volt system, negative ground
Battery	2-120 amp. Hour
Compressor, air, CFM(I /min)	29 CFM (830) at 2,600rpm
Horsepower (kW)	Gross 267 (200) at 2,600rpm
Torque, Max. ft-lb (kgm)	579 (80) at 1,400rpm
Capacity, gal.(liters)	
Cooling water	3.4 (13)
Lubrication	3.4 - 4.0 (13 - 15)
Fuel	79.2 (300)

## STANDARD EQUIPMENT

- Five section full power partially synchronized boom 37.7'~144.4' (11.5 m~44.0 m)
- 32.5'~58.1' (9.9 m~17.7 m) bi-fold lattice jib (tilt type) with 3.5°, 25° or 45° pinned offsets and self storing pins.
- Auxiliary lifting sheave (single top) stowable
- Variable speed main hoist with grooved drum, cable follower and 797' of 3/4" cable.
- Variable speed auxiliary hoist with grooved drum, cable follower and 436' of 3/4" cable.
- Drum rotation indicator (thumper type) main and auxiliary hoist
- Anti-Two block device (overwind cutout)
- Boom angle indicator
- Tadano electronic load moment indicator system (AML-L)
- Outrigger extension length detector
- Electronic crane monitoring system
- Tadano twin swing system and 360o positive swing lock
- Self centering finger control levers with pilot control
- Control pedals for boom hoist and boom telescoping
- 3 way adjustable cloth seat with armrests, high back and seat belt
- Tilt-telescoping steering wheel
- Tinted safety glass and sun visor
- Front windshield wiper and washer
- Roof window wiper and washer
- Power window (cab door)
- Rear view mirrors (right and left side)
- Mirror for main and auxiliary hoists
- Cigarette lighter and ashtray
- Electric fan in cab
- Cab floor mat
- Pump disconnect in operator's cab
- Hydraulic oil cooler

## **OPTIONAL EQUIPMENT**

- 80 ton (72.6 metric ton) 7 sheave with swivel hook and safety latch for 3/4"(19 mm) wire rope
- 50 ton (45.4 metric ton) 4 sheave with swivel hook and safety latch for 3/4"(19 mm) wire rope
- Hot water cab heater and air conditioner

## **HOISTING PERFORMANCE**

#### LINE SPEEDS AND PULLS

		Mair	n or auxi	iliary hois	t - 15'-3/4	4" (0.4m)	drum				
Layer	Speed		peeds <sup>2</sup>	Line pulls							
Layer	Speeu	Line s	peeus	Avail	able1	Permi	ssible <sup>4</sup>				
		F.P.M	m/min	Lbs.	kgf	Lbs.	kgf				
1st	High	378	115	18,200	8,260	15,200	6,880				
2nd	High	413	126	16,700	7,570	13,900	6,310				
3rd	High	448	136	15,400	6,990	12,800	5,820				
4th	High	482	147	14,300	6,490	11,900	5,410				
5th	High	502	157	13,400	6,060	11,100	5,050				
6th	High	551	168	12,500	5,680	10,400	4,730				
7th <sup>3</sup>	High	585	178	11,800	5,350	9,800	4,460				

<sup>1</sup> Developed by machinery with each layer of wire rope, but not based on rope strength or other limitation in machinery or equipment.

- <sup>2</sup> Line speeds based only on hook block, not loaded.
- <sup>3</sup> Seventh layer of wire rope are not recommended for hoisting operations.
- <sup>4</sup> Permissible line pull may be affected by wire rope strength.

- Independently controlled outriggers
- Four outrigger extension positions
- Self-storing outrigger pads
- Outrigger hose protection
- Mitsubishi 6M60-TLA3B turbo charged after cooled engine (267HP) with exhaust brake
- Electronic controlled automatic transmission driven by torque converter
- 4 X 4 X 4 drive/steer
- Non-spin rear differential
- Automatic rear axle oscillation lockout system
- 29.5-25 22PR (OR) or 29.5-25 28PR(OR) tires
- Disc brakes
- Fenders
- Air dryer
- Water separator with filter
- Engine over-run alarm
- Back-up alarm
- Low oil pressure/high water temp. warning device (visual)
- Rear steer centering light
- Air cleaner dust indicator
- Full instrumentation package
- Complete highway light package
- Flood lights and work lights
- Tool storage compartment
- Tire inflation kit
- 24 volt electric system
- 6.2 ton (5.6 metric ton) hook with swivel
- Towing hooks-Front and rear
- Lifting eyes
- Hook block tie down (front bumper)

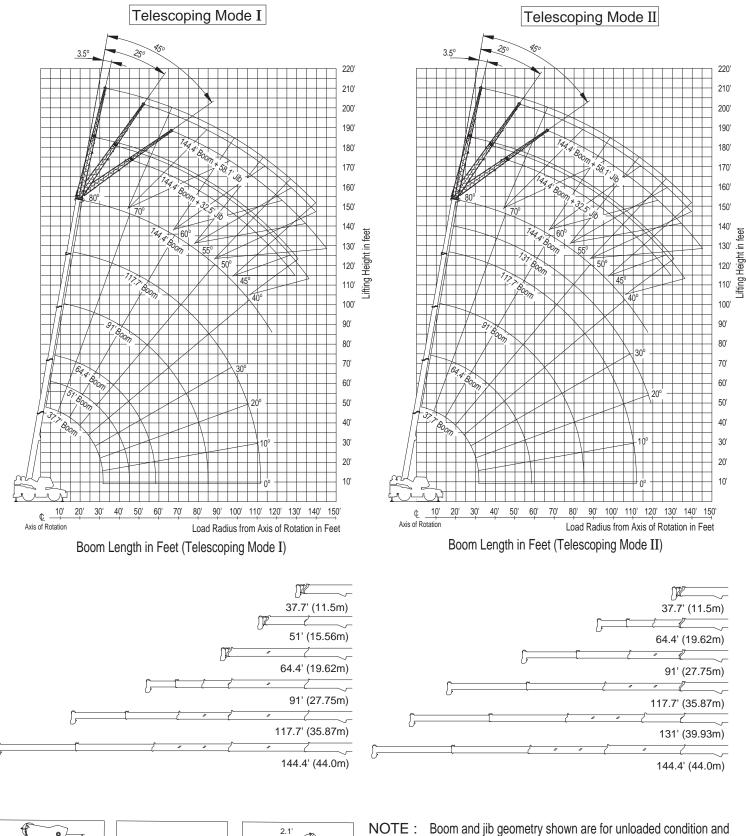
- Weighted hook storage compartment

DRUM	DRUM WIRE ROPE CAPACITIES												
Wire	Main a	ind auxiliary d	rum grooved l	agging									
		3/4" (19mm	) wire rope										
rope	Rope p	er layer	Total wire rope										
layer	Feet												
1	123.0	37.5	123.0	37.5									
2	134.2	40.9	257.2	78.4									
3	145.3	44.3	402.6	122.7									
4	156.5	47.7	559.1	170.4									
5	167.7	51.1	726.7	221.5									
6	178.8	54.5	905.5 276.0										
7	190.0	57.9	1,095.5	333.9									

#### DRUM DIMENSIONS

	Inch	mm
Root diameter	15-3/4"	400
Length	22-3/4"	578
Flange diameter	27-3/8"	695

## **TR-800XXL WORKING RANGE CHART**



 DTE : 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.

Approx. 7'

Å

Approx.

9

0

Approx 7.5'

ON OUTRIGGERS FULLY EXTENDED 23' 7-1/2" (7.2m) SPREAD																				
									60°	ROTAT										
A		37.7'		51'		64.4' (1		m)	91' (2 <u>7.75m</u> )			117.7' ( <u>35.87</u> m)				131'	144.4'			
В	С	(11.5m)		(15.56m)			С		С		С		С		С		С	(39.93m)	С	(44.0m)
10'	68°	160,000	75°	103,600	78°	88,100	78°	44,000												
12'		125,000		103,600	76°	88,100	76°	44,000												
15'		108,000		103,600	73°	88,100	73°	44,000		44,000		30,800								
20'	50°	78,400	63°	77,800	69°	71,900	69°	44,000	76°	44,000		30,800	79°	30,800	79°	17,600				
25'	38°	59,400	56°	59,000	64°	56,100	64°	44,000		44,000		30,800		30,800		17,600		17,600		17,600
30'	21°	45,900	48°	44,600	59°	42,600	59°	44,000	70°	39,000		26,700		30,800		17,600		17,600		17,600
35'			39°	33,800	53°	33,000		39,900		34,000		23,200		28,200	72°	17,600		17,600		17,600
40'			28°	26,300	47°	25,500	47°	32,300	63°	28,700		20,400		24,700		17,600		17,600		17,600
45'			5°	20,900	40°	20,000	40°	26,400		23,600		18,200	67°	21,800	67°			17,600		17,600
50'					32°	15,900	32°	21,900	55°	19,300		16,400	65°	19,500	64°	14,700	68°	16,200	71°	17,100
60'									46°	13,200		14,500		14,800	59°	11,900	63°	13,300		13,900
70'									36°	9,000		11,400	53°	10,700	53°	9,900	58°	11,100	_	10,900
80'									22°	6,100	24°	9,500	46°	7,600	46°	8,400	53°	9,000	57°	8,200
90'													38°	5,300	38°	7,200		6,900		6,100
100'													27°	3,500	28°	5,900	39°	5,100		4,300
110'													13°	2,100	12°	4,600	31°	3,600		2,900
120'													-		-		19°	2,600		1,800
D									) <sup>o</sup>			(= ( )						18°		32°
Talaaaaiaa								felesc	copin	g condi	tions	(%)								
Telescoping mode		I, II		Ι		Ι		II		Ι		II		Ι		II		II		I, II
2nd boom		0		50		100		0		100		0	100		0		50			100
3rd boom		0		0		0		33		33		66	66		100		100			100
4th boom		0		0		0		33		33		66	66		100		100		100	
Top boom		0		0		0		33		33		66		66		100		100		100

## LIFTING CAPACITIES AT ZERO DEGREE BOOM ANGLE ON OUTRIGGERS FULLY EXTENDED

	23' 7-1/2" (7.2m) SPREAD 360° ROTATION																
A		37.7'		51'		64.4'		64.4'	91'		91'		117.7'		117.7'		
c 🔨	В	(11.5m)	В	(15.56m)	В	(19.62m)	В	<b>B</b> (19.62m)		(27.75m)	В	(27.75m)	В	(35.87m)	В	(35.87m)	
0°	31.7'	41,600	45.0'	20,900	58.3'	11,500	58.3'	14,900	85.0'	5,200	85.0'	7,900	111.6'	2,000	111.6'	4,300	
relescoping I, II I I					II I				II I				II				

A :Boom length in feet

B :Load radius in feet

**C** :Loaded boom angle (deg.)

D :Minimum boom angle (deg.) for indicated length (no load)

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

-Standard number of parts of line for outrigger operation should be according to the following table.

Boom Length in Feet	37.7'	37.7' to 51'	51' to 64.4'	64.4' to 91'	91' to 144.4'	Single top						
(meters)	(11.5m)	(11.5m to 15.56m)	(15.56m to 19.62m)	(19.62m to 27.75m)	(27.75m to 44.0m)	Jib						
Number of parts of line	16	12	10	5	4	1						

	ON OUTRIGGERS FULLY EXTENDED 23' 7-1/2" (7.2m) SPREAD 360° ROTATION													
		144	.4' (44.0	m) Boo	m + 32.5	5' (9.9m)			4' (44.0)	m) Boor	n + 58.1	' (17.7m	ı) Jib	
	С	3.5°	offset	25° (	offset	45° d	offset	С	3.5° (	offset	25° (	offset	45° d	offset
		R	W	R	W	R	W		R	W	R	W	R	W
8	30°	32.7'	9,900	44.5'	8,800	52.7'	8,100	80°	40.6'	5,900	64.3'	5,400	73.5'	3,400
7	75°	50.3'	9,900	61.2'	8,700	67.6'	7,300	75°	60.6'	5,900	82.5'	4,800	89.9'	3,400
7	70°	66.4'	9,700	75.9'	7,600	81.2'	6,600	70°	79.3'	5,900	98.7'	4,200	105.0'	3,400
6	65°	80.5'	7,900	89.3'	6,600	93.9'	6,000	65°	95.6'	4,900	114.0'	3,700	118.0'	3,100
6	50°	93.7'	6,300	102.0'	5,700	106.0'	5,400	60°	111.0'	4,100	126.0'	3,300	131.0'	2,900
5	55°	106.0'	5,100	113.0'	4,500	116.0'	4,300	55°	124.0'	3,100	141.0'	2,900	142.0'	2,700
5	50°	117.0'	3,500	124.0'	3,100	125.0'	3,000	50°	137.0'	2,100	151.0'	1,800	152.0'	1,700
2	15°	127.0'	2,200	133.0'	2,000	134.0'	2,000	45°	149.0'	1,200				
2	10°	137.0'	1,300	142.0'	1,200						-	-		· · · · ·

# ON OUTRIGGERS FULLY EXTENDED 23' 7-1/2" (7.2m) SPREAD 360° ROTATION

						360° R						
с	117.7' (35.87m) Boom (telescoping mode I) + 32.5' (9.9m) Jib											
C	3.5°	offset	25° (	offset	45° (	offset						
	R	W	R	W	R	W						
80°	26.1'	12,300	37.7'	11,000	44.8'	8,400						
75°	40.1'	12,300	50.7'	10,000	57.0'	8,000						
70°	53.6'	12,100	62.9'	8,800	68.5'	7,400						
65°	65.7'	9,900	74.6'	7,700	79.0'	6,700						
60°	76.9'	8,400	85.2'	6,800	88.9'	6,200						
55°	87.6'	7,000	95.4'	6,000	98.2'	6,000						
50°	97.5'	5,800	104.0'	5,200	106.0'	5,400						
45°	106.0'	4,300	113.0'	4,000	114.0'	4,200						
40°	115.0'	3,200	120.0'	3,000								
35°	122.0'	2,400	126.0'	2,300								
30°	128.0'	1,700	132.0'	1,700								
25°	134.0'	1,200	137.0'	1,200								

	117.7' (35.87m) Boom (telescoping mode I)										
с			58.1' (1	7.7m) Jib							
Ŭ	3.5°	offset	25° c	offset	45° (	offset					
	R	W	R	W	R	W					
80°	33.6'	7,900	55.1'	5,700	67.0'	3,700					
75°	50.4'	7,900	70.3'	5,200	80.7'	3,700					
70°	65.9'	7,100	84.4'	4,700	93.1'	3,600					
65°	80.2'	6,000	97.2'	4,200	104.0'	3,500					
60°	93.5'	5,100	109.0'	3,800	114.0'	3,300					
55°	106.0'	4,500	120.0'	3,500	124.0'	3,100					
50°	117.0'	3,900	130.0'	3,200	132.0'	3,000					
45°	127.0'	2,900	138.0'	2,600	140.0'	2,600					
40°	136.0'	2,000	146.0'	1,800							
35°	145.0'	1,300	153.0'	1,200							

	ON OUTRIGGERS FULLY EXTENDED 23' 7-1/2" (7.2m) SPREAD 360° ROTATION														
	117.7	•		n (telesco		ode II)		117.7' (35.87m) Boom (telescoping mode							
С	+ 32.5' (9.9m) Jib							С			58.1' (1	7.7m) Ji			
C	3.5° offset 25° offset			offset	45° (	offset	Ŭ	C	3.5° c	offset	25° c	offset	45° (	offset	
	R	W	R	W	R	W			R	W	R	W	R	W	
80°	26.8'	11,000	39.1'	10,300	46.6'	8,300		80°	34.2	6,300	56.8	5,700	67.7'	3,700	
75°	41.0'	11,000	52.3'	9,300	58.8'	7,700		75°	51.0	6,300	71.7	5,100	81.4'	3,700	
70°	54.5'	10,600	64.5'	8,000	70.1'	6,900		70°	67.0	6,300	85.4	4,400	93.8'	3,600	
65°	66.3'	8,600	75.9'	7,000	80.4'	6,200		65°	80.9	5,300	98.4	3,900	105.0'	3,300	
60°	77.6'	7,100	86.6'	6,200	90.2'	5,700		60°	94.2	4,500	110.0	3,500	115.0'	3,000	
55°	88.4'	5,900	96.5'	5,300	98.9'	5,200		55°	106.0	3,900	121.0	3,100	124.0'	2,800	
50°	98.2'	5,000	105.0'	4,600	107.0'	4,500		50°	118.0	3,300	131.0	2,800	132.0'	2,700	
45°	107.0'	4,300	113.0'	4,100	114.0'	4,000		45°	128.0	2,800	139.0	2,600	140.0'	2,500	
40°	115.0'	3,800	120.0'	3,600			ſ	40°	137.0	2,400	147.0	2,300			
35°	122.0'	3,400	127.0'	3,300				35°	145.0	2,100	153.0	2,000			
30°	129.0'	3,100		3,000				30°	153.0	1,900	159.0	1,800			
25°	134.0'	2,800	137.0'	2,800				25°	159.0	1,700	163.0	1,700			
20°	139.0'	2,650						20°	164.0	1,550					
15°	142.0'	2,500						15°	168.0	1,450					

C :Loaded boom angle (deg.)

 ${\bf R}\,$  :Load radius in feet

 $\boldsymbol{W}$  :Rated lifting capacity in pounds

					ON	OUTRIG	GEF					11-3/4" (	6.7m	) SPRE	AD					
									<u>360°</u>	ROTAT		<u>,</u>								
A		37.7'		51'	_	64.4' (1		m)		91' (2		ר)		117.7' (		m)		131'	_	144.4'
В	С	(11.5m)		(15.56m)			С		С		С		С		С		С	(39.93m)	С	(44.0m)
10'	68°	160,000		103,600		88,100		44,000												
12'	65°	125,000		103,600		88,100														
15'	60°	108,000		103,600	-	88,100		44,000	-	44,000	-	30,800								
20'	50°	78,400	63°	77,800	69°	71,900	$69^{\circ}$	44,000	76°	44,000	76°	30,800	79°	30,800	79°	17,600				
25'	38°	59,400	56°	56,100	64°	55,200	$64^{\circ}$	44,000	73°	44,000	73°	30,800	77°	30,800	77°	17,600	79°	17,600	$80^{\circ}$	17,600
30'	21°	40,300	48°	39,200	59°	38,400	59°	44,000	70°	39,000	70°	26,700	75°	30,800	75°	17,600	77°	17,600	78°	17,600
35'			39°	29,000	53°	28,200	53°	35,200	66°	32,000	66°	23,200	72°	28,200	72°	17,600	75°	17,600	76°	17,600
40'			28°	22,200	47°	21,400	47°	27,600	63°	24,900	63°	20,400	70°	24,700	70°	17,600	73°	17,600	74°	17,600
45'			5°	17,000	40°	16,500	40°	22,200	59°	19,800	59°	18,200	67°	21,800	67°	16,400	71°	17,600	73°	17,600
50'					32°	12,800	32°	18,000	55°	15,900	56°	16,400	64°	17,800	64°	14,700	68°	16,200	71°	17,100
60'									46°	10,500	47°	14,500	59°	11,900	59°	11,900	63°	13,300	66°	12,800
70'									36°	6,800	37°	9,900	52°	8,000	53°	9,900	58°	9,600	61°	8,900
80'									22°	4,200	24°	7,100	45°	5,200	46°	7,800	52°	6,800	56°	6,100
90'													37°	3,200	38°	5,700	46°	4,700	51°	4,000
100'													27°	1,600	28°	4,100	39°	3,100	45°	2,400
110'															13°	2,800	30°	1,900	39°	1,200
D						0	C							27°		0°		30°		39°
								Teles	copin	ig condit	ions	(%)								
Telescoping mode		I, II		Ι		I		II		Ι		II		I		II		II		I, II
2nd boom		0		50		100		0		100		0		100		0		50		100
3rd boom		0		0		0		33		33		66		66		100		100		100
4th boom		0		0		0		33		33		66		66		100		100		100
Top boom		0		0		0		33		33		66		66		100		100		100

LIFTING CAPACITIES AT ZERO DEGREE BOOM ANGLE ON OUTRIGGERS MID. EXTENDED

						21	11-3/	4° (6.7n	n) Sf	READ	36	0° ROT	ATION			
A		37.7'		51'		64.4'		64.4'		91'		91'			117.7'	
C	В	(11.5m)	В	(15.56m)	В	(19.62m)	В	(19.62m)	В	(27.75m)	В	(27.75m)		В	(35.87m)	
0°	31.7'	36,400	45.0'	17,000	58.3'	9,000	58.3'	14,300	85.0'	3,200	85.0'	6,000		111.6'	2,500	
Telescoping mode	<b>'</b>	I, II		Ι		I		II		Ι		II			II	

A :Boom length in feet

B :Load radius in feet

**C** :Loaded boom angle (deg.)

D :Minimum boom angle (deg.) for indicated length (no load)

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

-Standard number of parts of line for outrigger operation should be according to the following table.

Boom Length in Feet	37.7'	37.7' to 51'	51' to 64.4'	64.4' to 91'	91' to 144.4'	Single top
(meters)	(11.5m)	(11.5m to 15.56m)	(15.56m to 19.62m)	(19.62m to 27.75m)	(27.75m to 44.0m)	Jib
Number of parts of line	16	12	10	5	4	1

			ON OU	TRIGGE	RS MID	). EXTEN 360° R(			(6.7m) \$	SPREA	D		
	144	.4' (44.0	m) Boo	m + 32.5	5' (9.9m)	) Jib		144.	4' (44.0)	n) Boor	n + 58.1	' (17.7m	) Jib
С	3.5° c	offset	25° c	offset	45° c	offset	С	3.5° c	offset	25° c	offset	45° o	offset
	R	W	R	W	R	W		R	W	R	W	R	W
80°	32.7'	9,900	44.5'	8,800	52.7'	8,100	80°	40.6'	5,900	64.3'	5,400	73.5'	3,400
75°	50.3'	9,900	61.2'	8,700	67.6'	7,300	75°	60.6'	5,900	82.5'	4,800	89.9'	3,400
70°	66.4'	9,700	75.9'	7,600	81.2'	6,600	70°	79.3'	5,900	98.7'	4,200	105.0'	3,400
65°	80.0'	7,200	89.3'	6,600	93.9'	6,000	65°	95.6'	4,900	114.0'	3,700	118.0'	3,100
60°	92.4'	4,700	101.0'	4,400	105.0'	4,100	60°	110.0'	3,400	127.0'	2,800	130.0'	2,500
55°	104.0'	2,900	112.0'	2,700	115.0'	2,600	55°	123.0'	1,800	138.0'	1,500	141.0'	1,400
50°	115.0'	1,600	122.0'	1,500	124.0'	1,500							

			ON OU	TRIGGE			IDED 21'		(6.7m)	SPREA	D		
							DTATION						
	117.7	" (35.87r	n) Boon	n (telesc	oping m	ode I)		117.7	' (35.87r	n) Boon	n (telesc	oping m	ode I)
С		ંન	- 32.5' (	9.9m) Jik	)		с		+	58.1' (1	7.7m) Ji	b	
C	3.5° d	offset	25° c	offset	45° o	offset		3.5° c	offset	25° o	offset	45° o	ffset
	R	W	R	W	R	W		R	W	R	W	R	W
80°	26.1'	12,300	37.7'	11,000	44.8'	8,400	80°	33.6'	7,900	55.1'	5,700	67.0'	3,700
75°	40.1'	12,300	50.7'	10,000	57.0'	8,000	75°	50.4'	7,900	70.3'	5,200	80.7'	3,700
70°	53.6'	12,100	62.9'	8,800	68.5'	7,400	70°	65.9'	7,100	84.4'	4,700	93.1'	3,600
65°	65.7'	9,900	74.6'	7,700	79.0'	6,700	65°	80.2'	6,000	97.2'	4,200	104.0'	3,500
60°	76.9'	8,100	85.2'	6,800	88.9'	6,200	60°	93.5'	5,100	109.0'	3,800	114.0'	3,300
55°	87.2'	5,700	94.8'	5,100	97.7'	4,700	55°	105.0'	3,800	120.0'	3,300	124.0'	3,000
50°	96.8'	3,900	104.0'	3,500	106.0'	3,400	50°	116.0'	2,500	129.0'	2,100	132.0'	2,000
45°	106.0'	2,600	112.0'	2,300	113.0'	2,300	45°	126.0'	1,400	138.0'	1,300	139.0'	1,200
40°	114.0'	1,600	119.0'	1,400									

#### ON OUTRIGGERS MID. EXTENDED 21' 11-3/4" (6.7m) SPREAD 360° ROTATION

						300 10		17(110)						
	117.7	•	'	n (telesco		ode II)			117.7'	•	'	n (telesco		ode II)
С			- 32.5' (	9.9m) Jik	)			С		+	58.1' (1	7.7m) Ji	b	
C	3.5° (	offset	25° c	offset	45° o	offset		C	3.5° c	offset	25° c	offset	45° c	ffset
	R	W	R	W	R	W			R	W	R	W	R	W
80°	26.8'	11,000	39.1'	10,300	46.6'	8,300	[	80°	34.2'	6,300	56.8'	5,700	67.7'	3,700
75°	41.0'	11,000	52.3'	9,300	58.8'	7,700		75°	51.0'	6,300	71.7'	5,100	81.4'	3,700
70°	54.5'	10,600	64.5'	8,000	70.1'	6,900		70°	67.0'	6,300	85.4'	4,400	93.8'	3,600
65°	66.3'	8,600	75.9'	7,000	80.4'	6,200		65°	80.9'	5,300	98.4'	3,900	105.0'	3,300
60°	77.6'	7,100	86.6'	6,200	90.2'	5,700		60°	94.2'	4,500	110.0'	3,500	115.0'	3,000
55°	88.4'	5,900	96.5'	5,300	98.9'	5,200		55°	106.0'	3,900	121.0'	3,100	124.0'	2,800
50°	98.2'	5,000	105.0'	4,600	107.0'	4,500		50°	118.0'	3,300	131.0'	2,800	132.0'	2,700
45°	107.0'	4,300	113.0'	4,100	114.0'	4,000		45°	128.0'	2,800	139.0'	2,600	140.0'	2,500
40°	115.0'	3,400	120.0'	3,300			1 [	40°	137.0'	2,100	146.0'	2,000		
35°	122.0'	2,700	126.0'	2,600			11	35°	145.0'	1,500	153.0'	1,400		
30°	128.0'	2,100	132.0'	2,100			11	30°	152.0'	1,100				
25°	134.0'	1,700	137.0'	1,700										
20°	138.0'	1,400												
15°	142.0'	1,200												

C :Loaded boom angle (deg.)

 ${\bf R}$  :Load radius in feet

W :Rated lifting capacity in pounds

					٥N	I OUTR	GGE	ERS MID	D. EX	TENDE	D 18	' 1/2" (5	.5m)	SPREA	D					
									60°	ROTAT			-							
A		37.7'		51'		64.4' (1		m)		91' (2		n)		117.7' (		m)		131'		144.4'
В	С	(11.5m)		(15.56m)			С		С		С		С		С		С	(39.93m)	С	(44.0m)
10'	68°	160,000		103,600		88,100		44,000												
12'	65°	125,000		103,600		88,100		44,000												
15'	60°	108,000		103,600		88,100		44,000		44,000	79°	30,800								
20'	50°	64,600	62°	62,400	69°	61,500		44,000		44,000		30,800	79°	30,800	79°	17,600				
25'	38°	42,600	56°	41,400	64°	40,600	64°	44,000	73°	43,500	73°	30,800	77°	30,800	77°	17,600	79°	17,600	80°	17,600
30'	21°	29,100	48°	30,300	59°	28,200	59°	34,200	70°	31,600		26,700	75°	30,800	75°	17,600		17,600	78°	17,600
35'			39°	21,100	53°	20,300	53°	26,100	66°	23,700	66°	23,200	72°	26,100	72°	17,600	75°	17,600	76°	17,600
40'			28°	15,700	47°	15,000	47°	20,500	62°	18,200	63°	20,400	70°	20,300	70°	17,600	73°	17,600	74°	17,600
45'			5°	11,600	40°	11,000	40°	16,300	59°	14,200	59°	18,000	67°	16,100	67°	16,400	71°	17,600	73°	16,900
50'					32°	8,000	32°	13,100	55°	11,100	55°	14,700	64°	12,800	64°	14,700	68°	14,700	70°	13,600
60'									46°	6,600	46°	10,000	58°	8,100	59°	10,900	63°	9,900	66°	8,900
70'									36°	3,500	36°	6,800	52°	4,900	52°	7,600	57°	6,700	61°	5,700
80'									21°	1,400	23°	4,600	45°	2,700	45°	5,300	52°	4,300	56°	3,500
90'															37°	3,500	45°	2,600	50°	1,800
100'															27°	2,200	38°	1,200		
110'															12°	1,100				
D						0	0							41°		12°		38°		50°
								Teleso	copin	g condit	ions	(%)								
Telescoping mode		I, II		Ι		Ι		II		Ι		II		Ι		II		II		I, II
2nd boom		0		50		100		0		100		0		100		0		50		100
3rd boom		0		0		0		33		33		66		66		100		100		100
4th boom		0		0		0		33		33		66		66		100		100		100
Top boom		0		0		0		33		33		66		66		100		100		100

LIFTING CAPACITIES AT ZERO DEGREE BOOM ANGLE ON OUTRIGGERS MID. EXTENDED

						18	' 1/2'	<u>(5.5m)</u>	SPR	EAD	360°	ROTA	TION		
A		37.7'		51'		64.4'		64.4'		91'		91'			
c 🔨	В	(11.5m)	В	(15.56m)	В	(19.62m)	В	(19.62m)	В	(27.75m)	В	(27.75m)			
0°	31.7'	26,400	45.0'	11,600	58.3'	5,000	58.3'	9,700	85.0'	1,100	85.0'	3,700			
Telescoping mode	·	I, II		I		I	-	II		I		II			

A :Boom length in feet

B :Load radius in feet

**C** :Loaded boom angle (deg.)

D :Minimum boom angle (deg.) for indicated length (no load)

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

-Standard number of parts of line for outrigger operation should be according to the following table.

Boom Length in Feet	37.7'	37.7' to 51'	51' to 64.4'	64.4' to 91'	91' to 144.4'	Single top
(meters)	(11.5m)	(11.5m to 15.56m)	(15.56m to 19.62m)	(19.62m to 27.75m)	(27.75m to 44.0m)	Jib
Number of parts of line	16	12	10	5	4	1

			ON OL	JTRIGG		D. EXTE 360° R(				(5.5m) S	PREAD	)		
	144	.4' (44.0	m) Boo	m + 32.	5' (9.9m	) Jib			144.	4' (44.0r	n) Boor	n + 58.1	' (17.7n	n) Jib
С	3.5° c	offset	25° c	offset	45° c	offset		С	3.5° c	offset	25° c	offset	45° c	ffset
	R	W	R	W	R	W			R	W	R	W	R	W
80°	32.7' 9,900 44.5' 8,800 52.7' 8,100 80° 40.6' 5,900 64.3' 5,400 73.5' 3,400													
75°	50.3'	9,900	61.2'	8,700	67.6'	7,300		75°	60.6'	5,900	82.5'	4,800	89.9'	3,400
70°	65.3'	8,000	75.0'	6,700	80.9'	6,300		70°	78.6'	5,400	98.7'	4,200	105.0'	3,400
65°	78.3'	5,000	87.5'	4,100	92.5'	4,000		65°	93.2'	3,100	112.0'	2,800	117.0'	2,400
60°	90.9'	2,800	99.2'	2,300	103.0'	2,300		60°	107.0'	1,500	125.0'	1,300	129.0'	1,100
55°	102.0'	1,300	111.0'	1,100	114.0'	1,100								

			ON OL	JTRIGGI					(5.5m) S	PREAD	)		
0	117.7	•		n (telesc 9.9m) Jil		node I)		117.7'	•		n (telesc 7.7m) J		node I)
С	3.5 <sup>°</sup> (	offset	25 <sup>°</sup> c	offset	45 <sup>°</sup> o	ffset	С	3.5° c	offset	25° c	offset	45 <sup>°</sup> c	ffset
	R	W	R	W	R	W		R	W	R	W	R	W
80°	26.1'	12,300	37.7'	11,000	44.8'	8,400	80°	33.6'	7,900	55.1'	5,700	67.0'	3,700
75°	40.1'	12,300	50.7'	10,000	57.0'	8,000	75°	50.4'	7,900	70.3'	5,200	80.7'	3,700
70°	53.1'	11,000	62.9'	8,800	68.5'	7,400	70°	65.9'	7,100	84.4'	4,700	93.1'	3,600
65°	65.0'	8,100	74.4'	7,300	78.9'	6,200	65°	79.9'	5,700	97.2'	4,200	104.0'	3,500
60°	75.6'	5,300	84.4'	4,800	88.4'	4,200	60°	92.0'	3,500	108.0'	3,000	114.0'	2,600
55°	86.2'	3,300	94.0'	3,000	97.2'	2,700	55°	104.0'	1,900	119.0'	1,700	123.0'	1,500
50°	95.8'	1,800	103.0'	1,700	105.0'	1,600							

ON OUTRIGGERS MID. EXTENDED 18' 1/2" (5.5m	) SPREAD
360° ROTATION	

	117.7	(35.87n	n) Boon	n (telesc	oping m	node II)			117.7' (35.87m) Boom (telescoping mode II)							
с		+	- 32.5' (	9.9m) Ji	b		С		+ 58.1' (17.7m) Jib							
	3.5°	3.5° offset		25° offset		offset			3.5° offset		25° c	offset	45° offset			
	R	R W		W	R	W			R	W	R	W	R	W		
80	26.8	11,000	39.1'	10,300	46.6'	8,300	80°	)	34.2'	6,300	56.8'	5,700	67.7'	3,700		
75	41.0'	11,000	52.3'	9,300	58.8'	7,700	75°	)	51.0'	6,300	71.7'	5,100	81.4'	3,700		
70	54.5	10,600	64.5'	8,000	70.1'	6,900	70°	)	67.0'	6,300	85.4'	4,400	93.8'	3,600		
65	66.3	8,600	75.9'	7,000	80.4'	6,200	65°	)	80.9'	5,300	98.4'	3,900	105.0'	3,300		
60	77.5	7,000	86.6'	6,200	90.2'	5,700	60°	)	94.2'	4,500	110.0'	3,500	115.0'	3,000		
55	87.8	5,000	96.0'	4,700	98.5'	4,300	55°	)	106.0'	3,500	121.0'	3,000	124.0'	2,700		
50	97.4	3,600	104.0'	3,400	106.0'	3,200	50°	)	117.0'	2,300	130.0'	2,000	132.0'	1,800		
45	106.0'	2,500	112.0'	2,500	114.0'	2,300	45°	)	127.0'	1,500	138.0'	1,300	139.0'	1,200		
40	114.0'	1,700	119.0'	1,700												
35	121.0'	1,200	126.0'	1,100												

C :Loaded boom angle (deg.)

R :Load radius in feet

W :Rated lifting capacity in pounds

	ON OUTRIGGERS MIN. EXTENDED 9' 2-1/4"(2.8m) SPREAD 360° ROTATION																			
A		37.7'		51'		64.4' (1	9.62		000	91' (2	-	n)		117.7' (	35.87	7m)		131'	144.4'	
в	С	(11.5m)	С	(15.56m)	С		С	1	С		С	ľ	С	(	С		С	(39.93m)	С	(44.0m)
10'	68°	84,100	75°	77,900	78°	76,000	78°	44,000												
12'	65°	62,000	72°	58,200	76°	56,800	76°	44,000												
15'	60°	42,400	68°	40,000	73°	39,000	73°	43,800	79°	41,700	79°	30,800								
20'	50°	25,700		23,900		23,200		28,700		26,600	76°	30,500		28,400						
				14,600	64°	19,900	72°	17,800	72°	21,600		19,500	77°	17,600	79°	17,600	80°	17,600		
30'	21°	11,000	48°	9,900	59°	9,200	58°	14,300	69°	12,400	69°	15,900	74°	13,900	75°	16,600	77°	15,700	78°	14,900
35'			39°	6,200		5,500	53°	10,400	65°	8,600	66°	11,900	72°	9,900	72°	12,700	74°	11,800	76°	11,000
40'			28°	3,400	47°	2,800	47°	7,400	62°	5,600	62°	8,900	69°	6,900	69°	9,600	72°	8,700	74°	7,900
45'			5°	1,300			40°	5,200	58°	3,400	58°	6,700	66°	4,700	66°	7,300	69°	6,400	71°	5,700
50'							32°	3,400	54°	1,700	54°	4,900	63°	2,900	64°	5,600	67°	4,700	69°	3,900
60'											45°	2,300			58°	3,000	62°	2,100	65°	1,300
70'															51°	1,200				
D		0	)°			44 <sup>°</sup>		0°	54° 43° 61°				51° 61°			61°		65°		
								Teles	copir	ig condit	ions	(%)								
Telescoping mode		I, II		Ι		Ι		II		Ι		II		Ι	II		II			I, II
2nd boom		0		50		100		0		100		0		100		0		50		100
3rd boom		0		0		0		33		33		66		66		100		100		100
4th boom		0		0		0		33		33		66		66		100		100		100
Top boom		0		0		0		33		33		66		66		100		100		100

	LIFTING CAPACITIES AT ZERO DEGREE BOOM ANGLE ON OUTRIGGERS MIN. EXTENDED													
	9' 2-1/4'' (2.8m) SPREAD 360° ROTATION													
A	A 37.7' 51' 64.4'													
C E	<b>3</b> (11.5m)	<b>B</b> (15.56m)	В	(19.62m)										
0° 31	.7' 9,400	45.0' 1,300	58.3	.3' 1,700										
Telescoping mode	I, II	Ι		II										

A :Boom length in feet

B :Load radius in feet

C :Loaded boom angle (deg.)

D :Minimum boom angle (deg.) for indicated length (no load)

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

-Standard number of	f parts of line for outrigger operation should be according	to the following table.

-Stanuaru numi	Sel OI parts OI III	ie ioi outrigger t	peration should	be according to	the following ta	bie.
Boom Length in Feet	37.7'	37.7' to 51'	51' to 64.4'	64.4' to 91'	91' to 144.4'	Single top
(meters)	(11.5m)	(11.5m to 15.56m)	(15.56m to 19.62m)	(19.62m to 27.75m)	(27.75m to 44.0m)	Jib
Number of parts of line	16	12	10	5	4	1

## WARNING AND OPERATING INSTRUCTIONS 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.
- Hydraulic cranes can be hazardous if improperly operated or maintained. Operation and maintenance of this machine must be in compliance with information in the *Operation and Maintenance Manual* supplied with the crane. If this manual is missing, order a replacement through the distributor.
- 3. The operator and other personnel associated with this machine shall fully acquaint themselves with the latest American National Standards Institute (ANSI) safety standards for cranes.

## SET UP

- Rated lifting capacities on the load chart are the maximum allowable crane capacities. They 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 surface.
- 2. For outrigger operation, outriggers shall be properly extended with tires free of supporting surface before operating crane.

## OPERATION

- 1. Rated lifting capacities have been tested to and meet minimum requirements of SAE J1063-Cantilevered Boom Crane Structures Method of Test.
- Rated lifting capacities do not exceed 85 % of the tipping load on outriggers fully extended as determined by SAE J765-Crane Stability Test Code.
   Rated lifting capacities for partially extended outriggers are determined by this formula, Rated Lifting Capacities =(Tipping Load - 0.1 x Tip Reaction)/1.25.
- 3. Rated lifting capacities above bold 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.
- 4. The weight of handling device such as hook blocks, slings, etc., must be considered as part of the load and must be deducted from the lifting capacities.
- 5. 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 the boom or jib is extremely dangerous.
- Rated lifting capacities do not account for the effects of wind on a lifted load or boom. Rated lifting capacities and boom length shall be appropriately reduced, when wind velocity exceeds 20 mph (9 m/sec.).
- 7. Rated lifting capacities at load radius shall not be exceeded. Do not tip the crane to determine allowable loads.
- Do not operate at boom lengths, radii, or boom angle, where no capacities are shown. Crane may overturn without any load on the hook.
- 9. 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.

- 10. When making lifts at a load radius not shown, use the next longer radius to determine allowable capacity.
- 11. Load per line should not exceed 12,300 lbs. (5,600kg) for main winch and auxiliary winch.
- 12. Check the actual number of parts of line with LOAD MOMENT INDICATOR (AML-L) before operation. Maximum lifting capacity is restricted by the number of parts of line of LOAD MOMENT INDICATOR (AML-L). Limited capacity is as determined from the formula, Single line pull for main winch (12,300 lbs.) x number of parts of line.
- 13. 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.
- 14. The 37.7' (11.5m) boom length capacities are based on boom fully retracted. If not fully retracted [less than 51'(15.56m) boom length, use the rated lifting capacities for the 51' (15.56m) boom length.
- 15. 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.
- 16. 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 12,300 lbs. (5,600kg) including main hook.
- 17. When base jib or top jib or both jib removing, jib state switch select removed.
- 18. When erecting and stowing jib, be sure to retain it by hand or by other means to prevent its free movement.
- 19. Use "ANTI-TWO BLOCK" 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.
- 20. For boom length with 32.5' (9.9m) jib, rated lifting capacities are determined by loaded boom angle only in the column headed "144.4' (44.0m) boom + 32.5' (9.9m) jib".
  For boom length with 58.1' (17.7 m) jib, rated lifting capacities are determined by loaded boom angle only in the column headed "144.4' (44.0m) boom + 58.1' (17.7m) jib".
  For angles not shown, use the next lower loaded boom angle to determine allowable capacity.
- 21. 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.

## DEFINITIONS

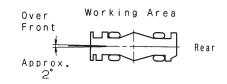
- 1. Load Radius: Horizontal distance from a projection of the axis of rotation to supporting surface before loading to the center of the vertical hoist line or tackle with load applied.
- 2. Loaded Boom Angle: The angle between the boom base section and the horizontal, after lifting the rated lifting 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.

ON RUBBER																		
A						Statio	onary	/								reep		
A		C	OVER	FRONT	-			36	50° R	OTATIO	Ν		OVER FRONT					
		37.7'		64.4'		91'		37.7'	64.4'		91'		37.7'		64.4'		91'	
В	С	(11.5m)	С	(19.62m)	С	(27.75m)	С	(11.5m)	С	(19.62m)	С	(27.75m)	С	(11.5m)	С	(19.62m)	С	(27.75m)
10'	68°	71,200					68°	49,500					68°	55,200				
12'	65°	62,200					65°	41,700					65°	47,800				
15'	59°	51,600					59°	29,400					59°	39,200				
20'	50°	39,400	69°	35,300			50°	18,000	69°	21,300			50°	29,000	69°	31,900		
25'	38°	28,000	64°	29,400			38°	11,600	64°	14,700			38°	22,200	64°	25,200		
30'	21°	20,300	59°	23,600	69°	22,100	21°	7,600	58°	10,600	69°	10,600	21°	17,200	59°	20,200	69°	21,200
35'			53°	18,100	$66^{\circ}$	19,100			$53^{\circ}$	7,500	$65^{\circ}$	7,800			53°	16,500	$66^{\circ}$	17,500
40'			47°	14,300	62°	15,300			47°	5,300	62°	5,800			47°	13,500	62°	14,600
45'			$40^{\circ}$	11,200	59°	12,400			$40^{\circ}$	3,600	58°	4,200			40°	11,100	59°	12,200
50'			32°	9,000	$55^{\circ}$	10,000			32°	2,300	54°	3,000			32°	9,000	55°	10,000
55'			21°	7,100	50°	8,200			21°	1,200	50°	2,100			21°	7,100	50°	8,200
60'					46°	6,600					45°	1,300					46°	6,600
65'					41°	5,400											41°	5,400
70'					36°	4,300											36°	4,300
75'					29°	3,400											29°	3,400
80'					22°	2,700											22°	2,700
D				0°				0°		21°		45°				0°		
							Te	elescopin	g con	ditions (9	%)							
Telescoping mode	~			I, II		II		II		I, II		II		II				
2nd boom			0		0		0		0		0		0					
3rd boom				0		33		66	0			33	66					
4th boom	om 0 33 66		66		0		33	66		0		33		66				
Top boom		0		33		66		0		33		66		0		33		66

ſ		LIFTING CAPACITIES AT ZERO DEGREE BOOM ANGLE ON RUBBER OPERATION																
ſ		Stationary										Creep						
	$\backslash$		(	DVER	FRON	Г			3	60° ROTATION	OVER FRONT							
	$\langle \rangle$		37.7'		64.4'		91'	37.7'				37.7'		64.4'		91'		
	c 🔪	<b>B</b> (11.5m) <b>B</b> (19.62m) <b>B</b> (27.75r				(27.75m)	В	(11.5m)		В	(11.5m)	В	(19.62m)	В	(27.75m)			
	0°	31.7'	18,600	58.3'	6,000	85.0'	1,900	31.7'	6,600		31.7'	16,100	58.3'	6,000	85.0'	1,900		

- A :Boom length in feet
- B :Load radius in feet
- C :Loaded boom angle (deg.)
- D :Minimum boom angle (deg.) for indicated length (no load)
- NOTE: -The lifting capacity data stored in the LOAD MOMENT INDICATOR (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 in Feet	37.7'	37.7' to 91'	Single top
(meters)	(11.5m)	(11.5m to 27.75m)	Jib
Number of parts of line	6	4	1



## WARNING AND OPERATING INSTRUCTIONS FOR ON RUBBER LIFTING CAPACITIES

- 1.Rated lifting capacities on rubber are in pounds and do not exceec 75 % of tipping loads as determined by SAE J765-Crane Stability Test Code.
- 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 bold 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	60 psi (4.2 kgf/cm <sup>2</sup> )
29.5-25 28PR	64 psi (4.5 kgf/cm <sup>2</sup> )

- Over front operation shall be performed within two degrees in front of chassis.
- On rubber lifting with "jib" is not permitted. Maximum permissible boom length is 91 ft. (27.75m).
- 8. When making lift on rubber stationary, set parking brake.
- For creep operation, boom must be centered over front of machine, swing lock engaged, and load restrained from swinging. Travel slowly and keep the lifted load as close to the ground as possible, and especially avoid any abrupt steering, accelerating or braking.
- 10. Do not operate the crane while carrying the load.
- 11. Creep is motion for crane not to travel more than 200 ft. (60 m) in any 30 minute period and to travel at the speed of less than 1mph (1.6km/h).
- 12. For creep operation, set Drive select switch to "4-WHEEL (Lo)" and set gear shift lever to "1".

## WARNING AND OPERATING INSTRUCTIONS FOR USING THE LOAD MOMENT INDICATOR (AML-L)

1. 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 register key, then the outrigger mode indicative symbol changes from flashing to a solid light. Press the lift mode select key to select the lift status that corresponds to the actual boom configuration. Each time the lift mode select key is pressed, the status changes. Press the register key to register the lift status, then the lift indicative symbol changes from flashing to a solid light. When mounting and stowing jib, select the jib set status. (The jib state indicative symbol will be flashing.)

## 2. 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 status changes. Select the creep operation, the on-tire mode indicative symbol flicker. Press the lift mode select key to register the boom or singe top

lift.

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 LOAD MOMENT INDICATOR(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.

- 3. A swing does not automatically stop even if the crane becomes overloaded.
- 4. During crane operation, make sure that the displays on front panel are in accordance with actual operating conditions.
- 5. The displayed values of LOAD MOMENT INDICATOR (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.

6. LOAD MOMENT INDICATOR (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 LOAD MOMENT INDICATOR (AML-L) aids in place of good operating practice can cause an accident. The operator must exercise caution to assure safety.

## **TR-800XXL- 4 Axle weight distribution chart**

		Pounds		Kilograms			
	GVW	Front	Rear	GVW	Front	Rear	
Base machine	106,535	54,453	52,082	48,315	24,695	23,620	
Remove: 1. 6.2 ton (5.6 metric ton) hook ball	-289	-401	112	-131	-182	51	
2. Top jib (25.6')	-677	-880	203	-307	-399	92	
3. Base jib (32.5')	-1,832	-3,543	1,711	-831	-1,607	776	
4. Auxiliary lifting sheave	-110	-324	214	-50	-147	97	
5. Removable Counterweight	-17,347	7,431	-24,778	-7,867	3,370	-11,237	
Options: 1. 80 ton (72.6 metric ton) hook block	1,817	3,276	-1,459	824	1,486	-662	
2. 50 ton (45.4 metric ton) hook block	950	1,713	-763	431	777	-346	
3. Hot water cab heater and air conditioner	214	68	146	97	31	66	

## **MEMO**

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