

BSF-CRNO24

TOA MINI-CRANE

OPERATIONS MANUAL

TC-304HAL-MK III

GLEASON CRANES AUSTRALIA PTY LTD
ABN 27 100 354 372
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TOA CO., LTD.

5) External Parts of the Crane and their Names

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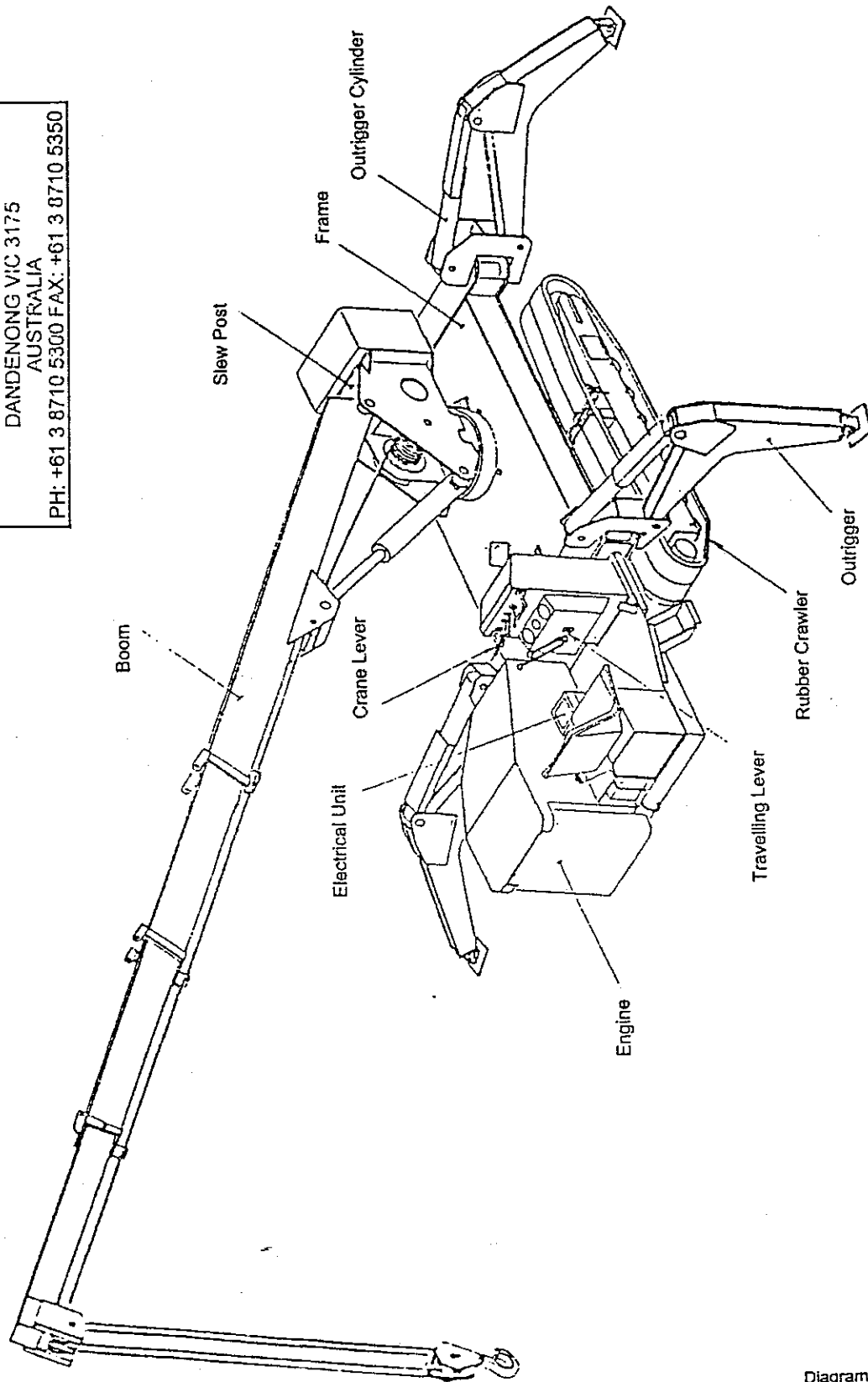


Diagram 2

External Dimensions

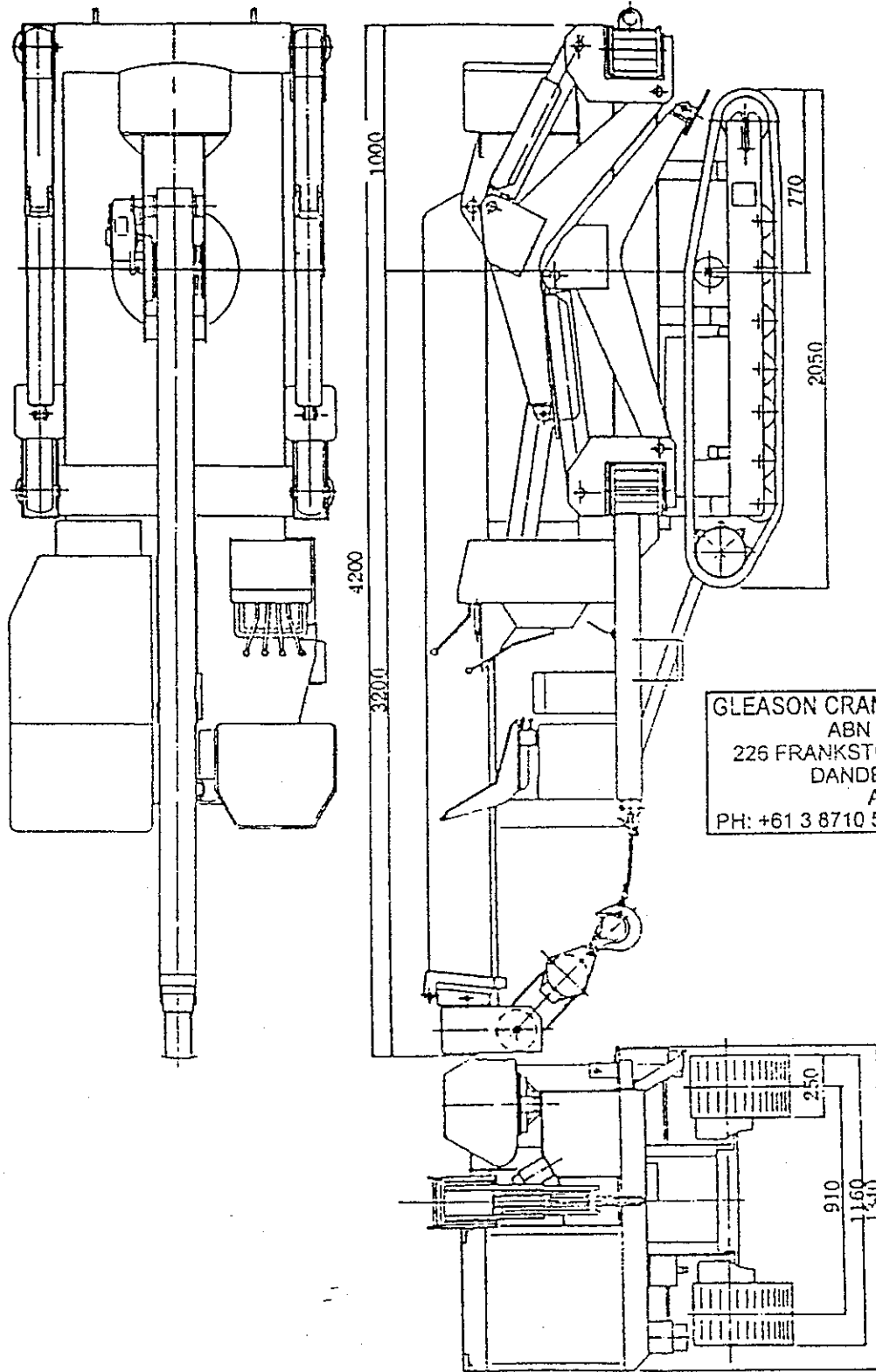


Diagram 3

10. Ground Contact Load Chart for Toa Crane Model TC304HAL

When using boom section A and boom sections A and B

Working Radius (m)	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.4
Rated Load (t)	2.9	2.5	2.0	1.6	1.3	1.1	0.93	0.8
Ground Contact Load (t)	3.1	3.3	3.3	3.2	3.1	3.0	3.0	2.9

When using boom sections A, B and C

Working Radius (m)	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5
Rated Load (t)	2.0	1.6	1.3	1.1	0.92	0.77	0.67	0.57	0.52	0.45
Ground Contact Load (t)	3.2	3.1	3.0	3.0	2.9	2.8	2.7	2.7	2.7	2.6

When using boom sections A, B, C and D

Working Radius (m)	3.0	4.0	5.0	6.0	7.0	8.0	9.0	9.7
Rated Load (t)	1.0	0.9	0.77	0.67	0.52	0.41	0.34	0.31
Ground Contact Load (t)	2.0	2.3	2.49	2.64	2.57	2.5	2.5	2.5

※1 The ground contact loads in these charts are based on the rated load and are the maximum load a single outrigger leg can support.

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4) Working Area Chart and Rated Load Chart

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Working Area Chart

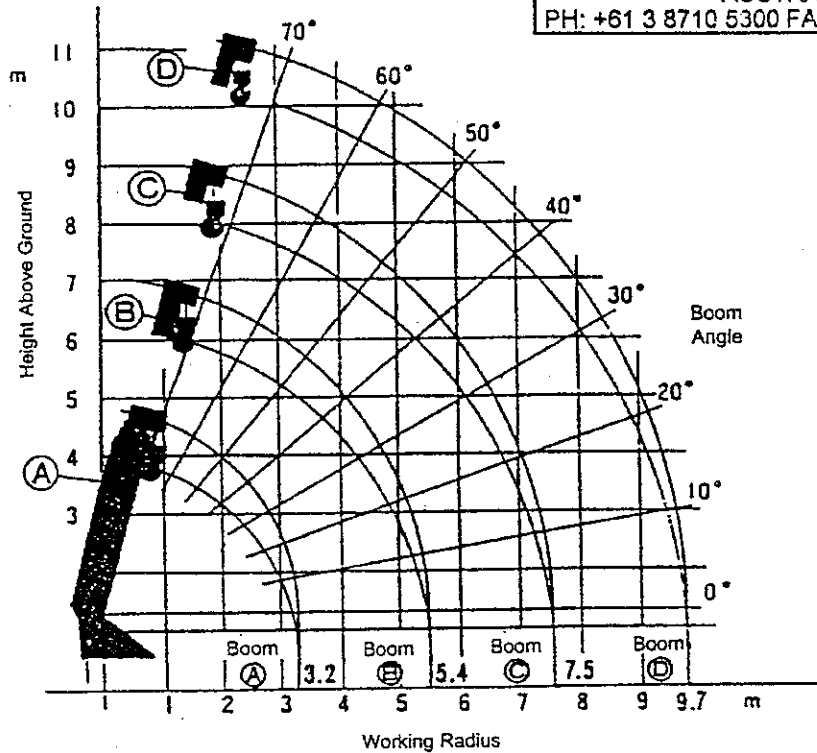


Diagram 1

Rated Load Chart (Loads include the weight of the hook)

When using boom sections A and B:

Working Radius (m)	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.4
Rated Load (t)	2.9	2.5	2.0	1.6	1.3	1.1	0.93	0.8

When using boom sections A, B and C: (This chart should be used even if boom section C is only slightly extended)

Working Radius (m)	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5
Rated Load (t)	2.0	1.6	1.3	1.1	0.92	0.77	0.67	0.57	0.52	0.45

When using boom section A, B, C and D: (This chart should be used even if boom section D is only slightly extended)

Working Radius (m)	3.0	4.0	5.0	6.0	7.0	8.0	9.0	9.7
Rated Load (t)	1.0	0.9	0.77	0.67	0.52	0.41	0.34	0.31

The rated loads are applicable when the outriggers are extended to their standard position (p18). These loads must be reduced to 70% when operating the crane with the boom facing the driver's side.

1. Summary

■ Main Data

		TC-304HAL-III			TC-304HAL-III
Performance	Rated Load	2900kg.f	Engine	Type	Kubota Diesel D850B
	Maximum Working Radius	9.7m		Maximum Power	18ps / 3000rpm
	Maximum Height above Ground	9.76m		Speed	Drive 1 st Speed
Hoisting Equipment	Winch Type	Hydraulic motor driven spur gear	2 nd Speed		
	Wirerope	7 x 7 + 6Fi29 φ9 70m	Reverse	1.4	
	No. of Rope Hangs	4 Hangs	Travelling Device	Hydraulic motor driven gear	
	Hook Speed	11.7m/min	Brakes	Negative operating disk brakes	
	Brake Type	Mechanical brake	Braking Angle	15°	
	Boom Extending Equipment	Boom Length	9.7m	Steering Set-Up	Right and left independent control
No. of Boom Extensions		4 Extensions	Turning Method	Pivot turn / Spin turn type	
Extension Type		2 sections hydraulic, 1 section manual	Clutch Set-Up		
Hydraulic Stroke		4500mm	Brake Type		
Time to Full Extension		22 sec	Allowable Hill Ascending Gradient	20°	
Boom Hoisting Equipment		Boom Hoist Type	Linear hydraulic ram	Crawler Belt Material	Synthetic rubber
	Boom Hoist Angle	0 ~ 75°	Crawler Belt Width (Crawler Belt Track)	250 (1600) mm	
	Time to Full Boom Hoist	15 sec	Effective Ground Contact Length (Projected Length)	560 (1600) mm	
Slewing Equipment	Slew Type	Hydraulic motor driven worm gear	Ground Contact Pressure	1.0kgf/cm ²	
	Slew Angle	360° continuous circle	Weight	2982kgf	
	Slew Speed	1.3rpm	Dimensions	Total Length	4200mm
Outrigger	Retaining Method	Leg angle selector pin insertion		Total Width	1340mm
	Set-Up Method	Hydraulic cylinder jack		Total Height	1550mm
Safety Devices	Over-Hoisting Prevention Device	Load meter	Hydraulic Equipment	Hydraulic Pump	2 speed gear pump
		Boom angle		Relief Set Pressure	190kgf/cm ²
	Hydraulic Circuit Safety Device	Hydraulic relief valve		Working Oil Capacity	60 ℓ
		Hydraulic automated lock valve	Fuel Tank Capacity	30 ℓ	
	Other Safety Devices	Over hoisting warning device	Other Devices	Battery Capacity	12V 65Ah
	Warning buzzer				