

**GROVE**™ 870 E

**GROVE**®  
**COLES**

**TM 870E**

Truck-mounted hydraulic crane

- 34.60 metre (113ft 6in) main boom
- Maximum on-board tip height 54 metres (177ft)
- 10 x 6 drive standard
- Optional \*26.80 metre (88ft) offsettable jib



SPECIFICATIONS



## SUPERSTRUCTURE SPECIFICATIONS

<b>Boom</b>	11m to 34.60m (36ft to 113ft 6in), four-section, Trapezoidal, full-power boom. Maximum tip height 36m (118ft).
<b>Swingaway</b>	9.80m (32ft) lattice Swingaway boom extension, stows alongside base boom section when not in use. Maximum tip height 46m (151ft).
<b>Optional *jib</b>	6.10m to 8.50m (20ft to 28ft) telescopic offsettable (5°, 17° and 30°) A-frame jib mounted on lattice extension. Maximum tip height 54m (177ft).
<b>Optional *jibs</b>	4.30m (14ft) base combines with Swingaway extension to make basic 14m (46ft) jib. Additional 4.30m (14ft) lattice inserts available to make 18.30m (60ft), 22.60m (74ft) and 26.80m (88ft) jib lengths. Offsettable to 5°, 17° and 30°. Maximum tip height 63m (207ft).
<b>Boom nose</b>	Six sheaves, mounted on heavy duty tapered roller bearings. Removable pin-type rope guards. Optional *auxiliary boom nose for single line lifting.
<b>Boom elevation</b>	Two double-acting hydraulic cylinders with integral holding valve provides elevation from -4° to +80°.
<b>Control lever lockout</b>	For use with optional *safeload or optional *load-moment indicator.
<b>Cab</b>	Full vision, all-steel fabricated with safety glass throughout. Length-adjustable combination hand-foot crane controls. Complete instrumentation including hoist-drum rotation indicator. Outrigger controls and site level bubble.
<b>Swing</b>	Ball-bearing swing circle with 360° continuous rotation. Grove planetary Glideswing with multi-disc swing brake. Spring-applied, hydraulically released park brake. Plunger-type two position house lock. Maximum speed 1.8 rpm.
<b>Counterweight</b>	2000 kg (4409 lb) fixed section, 7000 kg (15,432 lb) hydraulically removable section, (stowable on carrier).
<b>Engine</b>	Cummins V555-230, eight-cylinder, naturally-aspirated, water cooled diesel. 9.1 litre, 148 kw (199 bhp) at 3000 rpm; maximum torque 780 Nm (575 lb ft) at 1900 rpm.

### HYDRAULIC SYSTEM

<b>Pumps</b>	Two tandem gear pumps, with manual disconnect, combined capacity 670 litres/minute (177 US gallons/minute). Maximum pressure 175 kg/cm <sup>2</sup> (2500 PSI).
<b>Valves</b>	Precision, four-way, double-acting control valves with four individual valve banks, permitting simultaneous multi-functioning.
<b>Filter</b>	Return-line type filter, with by-pass protection and indicator. 25 micron rated cartridge.
<b>Reservoir</b>	852 litres (225 US gallons) capacity. Internal baffles, particle magnet and exterior oil level gauge.
<b>Oil cooler</b>	Thermostatically controlled, electric fan motor.
<b>Optional *equipment</b>	Safeload/load moment indicator, hoist-drum cable follower on optional *auxiliary hoist, air conditioning, spotlights, rotating beacons, hookblocks, diesel cab heater.

### HOIST SPECIFICATIONS

Series parallel circuitry and two motors provide both high line pull and speed ranges, power up and down, equal speed, planetary reduction with integral brake and electronic hoist drum rotation indicator.

	<b>Main hoist Grove H030 B-26</b>		<b>*Auxiliary hoist Grove H030 B-16</b>	
	Low Range	High Range	Low Range	High Range
<b>Maximum single line speed</b>				
Bare drum	68m/min (223fpm)	138m/min (453fpm)	68m/min (223fpm)	138m/min (453fpm)
Mean drum	79m/min (259fpm)	160m/min (523fpm)	79m/min (259fpm)	160m/min (523fpm)
Full drum	90m/min (295fpm)	181 m/min (594fpm)	90m/min (295fpm)	181 m/min (594fpm)
<b>Maximum single line pull</b>				
Bare drum	7280 kg (16,050 lb)	3640 kg (8025 lb)	7280 kg (16,050 lb)	3640 kg (8025 lb)
Mean drum	6417 kg (14,147 lb)	3209 kg (7075 lb)	6417 kg (14,147 lb)	3209 kg (7075 lb)
Full drum	5554 kg (12,245 lb)	2778 kg (6125 lb)	5554 kg (12,245 lb)	2778 kg (6125 lb)
<b>Maximum usable rope storage</b>	260m of 19mm dia. (853ft × ¾in)		160m of 19mm dia. (525ft × ¾in)	

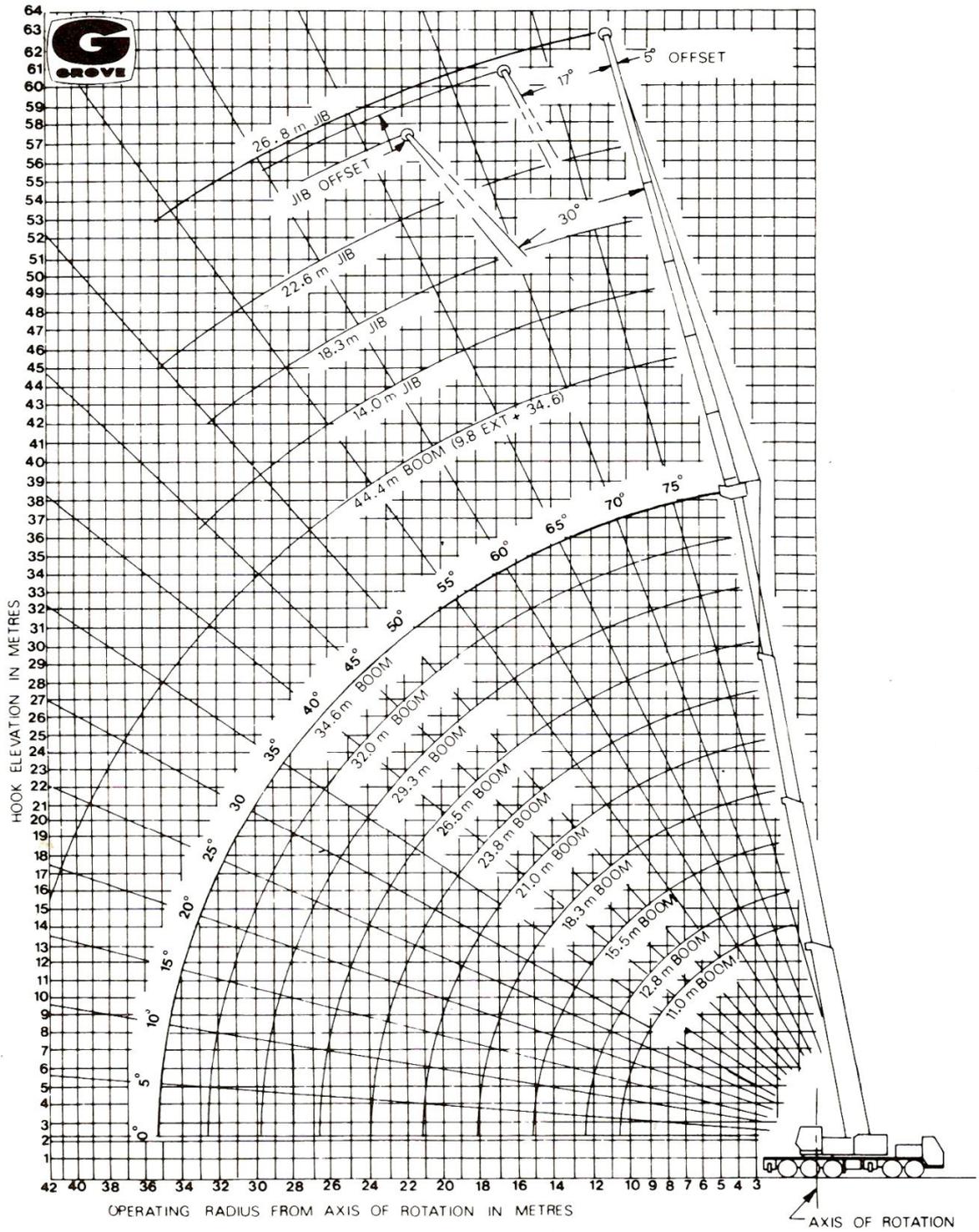
Hoist drum cable follower on main hoist

*Indicates optional item*

**CARRIER SPECIFICATIONS**

<b>Frame</b>	High-strength steel, all-welded triple-box design with integral outrigger housings. Incorporating front and rear towing brackets.	<b>Tyres</b>	14.00 x 24 highway radials all-round. Tyre inflation equipment.
<b>Outrigger system</b>	Hydraulic with holding valves. Two-stage telescopic beam outriggers. Steel fabricated, quick-release outrigger floats, 775mm (30.5 in) diameter	<b>Lights</b>	Full lighting including head, tail, braking, fog, directional and hazard warning lights.
<b>Front stabilizer</b>	Fifth vertical stabilizer with removable steel fabricated float. Permits 360° lifting.	<b>Cab</b>	Two-man design GRP fabricated, acoustically treated, left-hand drive, fitted with safety glass, dual rearview mirrors, heater and demister fan. Full travel controls and instrumentation.
<b>Outrigger controls</b>	Situated in superstructure cab and on both sides of the carrier frame. Push-button electric controls requiring two-handed operation. Site level bubble located adjacent to each set of controls.	<b>Maximum speed</b>	64 kph (40 mph).
<b>Engine</b>	Cummins NTC 350, six-cylinder, turbocharged, water cooled diesel 14 litre, 261 kw (350 bhp) at 2100 rpm; maximum torque 1365 Nm (1007 lb ft) at 1400 rpm.	<b>Gross vehicle weight and axle loads</b>	Axle 1: 12,000 kg (26,455 lb) Axle 2: 12,000 kg (26,455 lb) Axle 3: 12,000 kg (26,455 lb) Axle 4: 12,000 kg (26,455 lb) Axle 5: 12,000 kg (26,455 lb) GVW: 60,000 kg (132,275 lb)  Above weights for TM 870E to standard specification plus optional *A-frame jib, *maximum hookblock and *load-moment indicator.
<b>Fuel tank capacity</b>	400 litres (106 US gallons).	<b>Optional *equipment</b>	Spare wheel assembly and handling device, rotating beacons, diesel cab heater, air conditioning.
<b>Electrical system</b>	24v including starting.	<i>*Indicates optional item</i>	
<b>Drive</b>	10 x 6 (optional *10 x 4).		
<b>Steering</b>	Semi-integral type, power assisted.		
<b>Transmission</b>	Nine forward, one reverse speed.		
<b>Axles</b>	1: Steer-Drive (optional *steer-non-drive) 2: Steer 3: Steer 4: Drive with lockable inter-axle differential 5: Drive  All drive axles are of planetary reduction type.		
<b>Suspension</b>	Front: Tandem equalising leaf spring and radius rods. Rear: Tridem equalising leaf spring and radius rods.		
<b>Brakes</b>	Dual-line air system operating on all wheels. Spring-applied air-released park brake acting on three rear axles. Engine exhaust brake.		

**RANGE DIAGRAM - MAIN BOOM - FIXED OFFSET JIBS**





**RATED LIFTING CAPACITIES IN KILOGRAMS**

**BOOM LIFTING CAPACITIES ON OUTRIGGERS 360°**

RADIUS IN METER	MAIN BOOM LENGTH IN METERS										34.6m MAIN BOOM + 9.8m EXT.
	11.0	12.8	15.5	18.3	21.0	23.8	26.5	29.3	32.0	34.6	44.4
3.0	7000	48395	46080	45355	43860						
3.5	68425	48395	46080	44315	40775	38415					
4.0	62600	48395	45085	42025	38165	37215					
4.5	57625	48395	43475	38940	36195	35435	29255				
5.0	53225	48395	41455	36215	34060	33540	28210				
6.0	45700	45625	36025	32295	29550	29345	25215	23540	21975	17575	
7.0	38650	38650	32725	29210	26080	24855	22290	21135	20000	16235	
8.0		33450	29975	25550	23605	21475	19820	19095	17980	14945	10205
9.0		28875	27650	23425	21475	19615	17980	17620	16260	13875	9705
10.0			25300	21600	19050	17960	16420	15920	14760	12925	8890
12.0			19625	18650	16300	15175	13605	13265	12425	11335	7345
14.0				15720	14150	13175	12150	11325	10610	10090	6530
16.0					12530	11550	10600	9885	9320	8985	5985
18.0					10145	10145	9340	8670	8140	7800	5260
20.0						8140	8140	7660	7160	6820	4670
23.0							6005	6005	5960	5630	3940
26.0								4550	4550	4550	3395
29.0									3500	3500	3010
32.0										2635	2675
35.0											2395
<b>Min. Boom Angle (Deg.) at Indicated Length (No Load)</b>										<b>0</b>	<b>0</b>
<b>Max. Boom Length (M) at 0 Degree Boom Angle (No Load)</b>										<b>34.6</b>	<b>44.4</b>