

SPECIFICATIONS

BOOM

The boom is three section telescopic full power hydraulic.

The three (3) boom sections are fabricated utilizing a rectangular box section design. The steel used in fabrication is designed for operation in cold ambient temperatures of -40°C.

The boom extension cylinders are sized to permit telescoping with rated load to maximum extension. Replaceable nylatron wear pads are used on the top and bottom of each boom section. Adjustable, replaceable, nylatron, side thrust wear pads are used on the outer end of the base, and mid sections.

The tip section has two fixed, bearing mounted, drop sheaves for either single or up to four part reeving.

BOOM LIFT

The boom lift function is controlled by tow (2) double acting cylinders, existing on Caterpillar 235B Carrier.

Holding valves are bolted to each cylinder hard line to prevent accidental boom lowering due to hose or tube damage.

SWING

The swing function is part of the Caterpillar 235B Carrier.

Swing function is 360 degrees continuous due to the design of Caterpillar 235B Carrier

CONTROLS

The ARA3000 boom utilizes existing controls in the Caterpillar 235B Carrier, with some modifications due to direction and position of control.

CONTROL VALVE

The directional control valves utilized are standard on the Caterpillar 235B Carrier.

POWER SOURCE

The hydraulic pressure required from the Caterpillar 235B Carrier engine is 2800 psi for crane operations. The existing pressure lines and return lines leading to the valving are used to supply oil flow to the crane.

MOUNTING

The boom mounts to the Caterpillar 235B Carrier utilizing existing excavator boom supports and pins.

HOIST

The hoist is a Braden model PD15B-41064-04 with planetary reductions and fail safe brake. The hoist has 12,000 lb single line pull @ 200 fpm line speed based on 80 gpm system flow. The crane is reeved 4 part providing 40,000 lb hoisting capability from 0 to 50 fpm hook speed.

HOOK BLOCK

A hook block for four part reeving with swivel hook is not supplied. Hook block should be rated for 40,000 lbs lift capacity.

CAPACITY

40,000 lbs to 12'-0" radius, and 8,000 lbs to 40 ft. Maximum extension.

A 360 degree capacity chart is provided, detailing loads and angles. Attempts may be made to telescope boom under all load conditions but due to lubrication and other factors it's operation may be limited.

LOAD MONITOR SYSTEM

An overload system is incorporated into the design of the crane to prevent imposing an overload.

See section 8 of this manual for more detail on load monitor and anti-two block system.

GENERAL

Boom:

Extended length: 41.7 ft radius

Retracted length: 19.7 ft radius

(from centre of rotation to centre of boom tip)

Height overall: 11' (Boom horizontal)

Length overall: 32' (Boom retracted)

Function speeds and times (based on 80 gpm system flow):

Swing speed: 4 rpm

Boom luffing (0° to +70°): 12 sec up

8 sec down

Boom ext'n (min to max): 23 sec

Boom ret. (Min to max): 17 sec

Swing: 360 degrees continuous

Boom elevation: -10 to +70 degrees

Boom tip height @ full extension: 45'

Weight: 11,000 lbs

(Approx. Wt of Boom Assembly)

Rev B 99 05 25

CRANE CONFIGURATION

