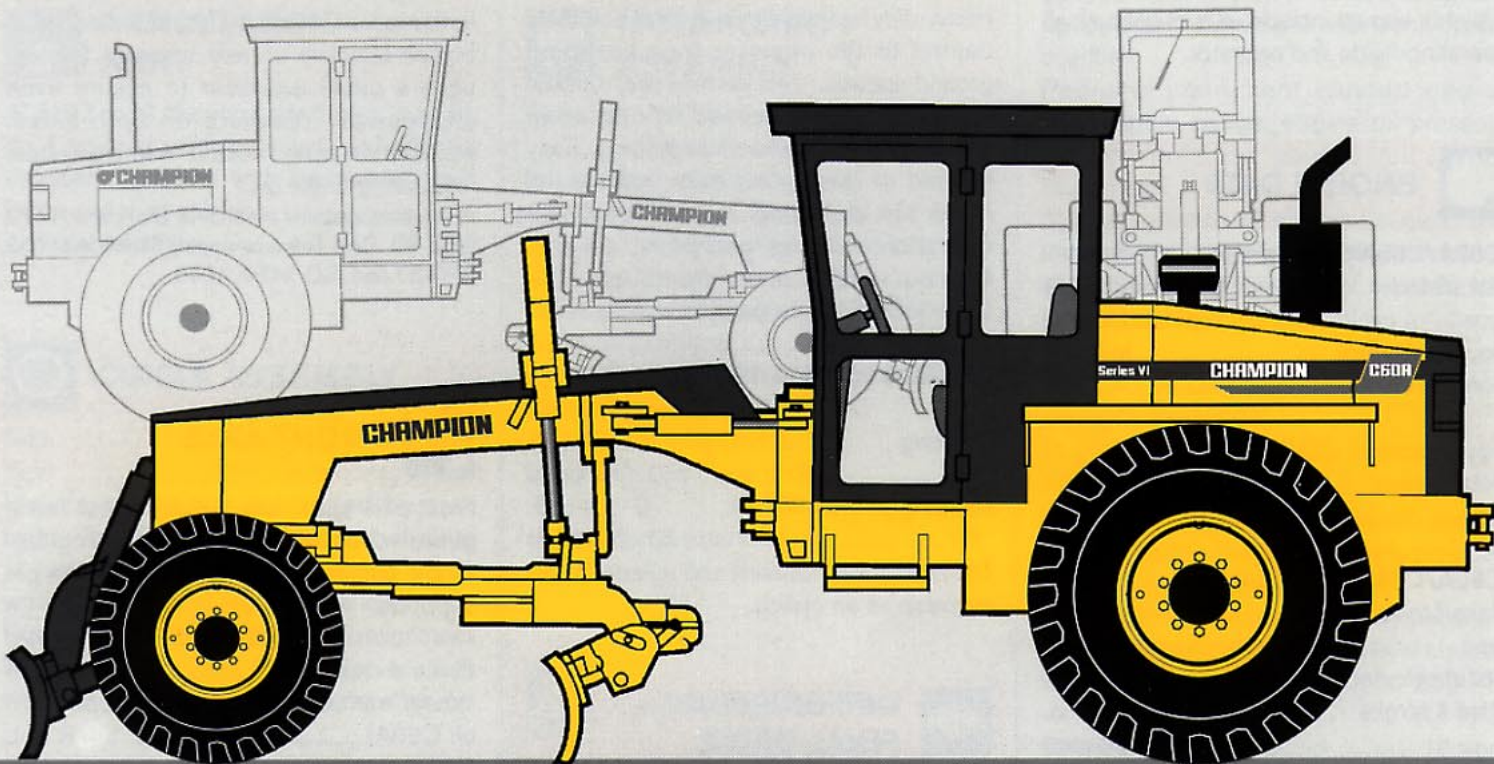


Series VI

CHAMPION C60A / C66A

TANDEM DRIVE/ALL WHEEL DRIVE COMPACT MOTOR GRADERS



KEY FEATURES

- Infinitely variable ground speeds 0-20 mph (0-32 km/h)
- Low emission, high efficiency Cummins diesel engine
- ROPS Canopy or fully enclosed cab ROPS
- Tight turning radius 13' 6" (4 115 mm)
- Full range of front and rear attachments
- Fully-adjustable, low-effort, operator-friendly controls
- Single axle drive or All Wheel Drive
- Dual lever speed and directional controls
- Hydraulically Boosted Dual Braking System with reserve power assist
- Heavy-duty positive traction differential
- 2-speed rear axle gearbox with neutral position
- 10' (3 048 mm) hydraulic sliding moldboard

MODEL	C60A	C66A
Configuration	Single Axle Drive	All Wheel Drive
Engine	Cummins 4B3.9	Cummins 4B3.9
Output (SAE J1349)	80 hp (60 kW)	80 hp (60 kW)
Operating weight	11,250 lb. (5 100 kg)	11,800 lb. (5 352 kg)
Turning Radius	13' 6" (4 115 mm)	

CHAMPION[®] MOTOR GRADERS

A Company within the Volvo Construction Equipment Group

C60A/C66A

C60A -Articulated Frame, Single Axle Drive C66A -Articulated Frame, All-Wheel-Drive



OPERATING WEIGHTS

(C60A)		
Total	11,250 lbs.	5 100 kg
Front wheels	3,400 lbs.	1 540 kg
Rear wheels	7,850 lbs.	3 560 kg

(C66A)		
Total	11,800 lbs.	5 352 kg
Front wheels	3,700 lbs.	1 678 kg
Rear wheels	8,100 lbs.	3 674 kg

Weights shown include ROPS canopy, all operating fluids and operator.



ENGINE DATA

(C60A/C66A Standard)

Make/Model	Cummins 4B3.9
Type	4 cycle, naturally aspirated, diesel
No. of cylinders	In-line 4
Bore & stroke	4.02 in. x 4.72 in. (102 mm x 120 mm)
Displacement	239 cu. in. (3.92 L)
Horsepower	80 @ 2500 RPM (60 kW @ 2500 RPM)

(C60A/C66A Optional)

Make/Model	Cummins 4BT3.9
Type	4 cycle, turbocharged, diesel
No. of cylinders	In-line 4
Bore & stroke	4.02 in. x 4.72 in. (102 mm x 120 mm)
Displacement	239 cu. in. (3.92 L)
Horsepower	110 @ 2500 RPM (82 kW @ 2500 RPM)

Engine equipped with a dual element, dry-type air cleaner with evacuator. 12 volt starting and electrical system with 65 amp (780 watt) alternator.

Performance: rated gross horsepower to SAE J1995 standard conditions with water pump, lubricating oil pump and fuel system.



TRANSMISSION

Type Heavy-duty hydrostatic
Control Hand lever
Transmission is "declutched" by brake pedal. Mechanical neutral lockout with neutral start switch.

Operating pressure	3000 PSI (20 700kPa)
Maximum pressure	5000 PSI (34 500 kPa)

Heavy-duty hydrostatic drive gives complete control to the operator over operating ground speeds. This permits very smooth increases or decreases in operating speeds, essential when fine grading. Easy forward or reverse selection without the need for clutching makes repetitive operation, such as pad work, simpler. Infinitely variable motor control provides faster job-site cycle times.

SPEEDS (@ 2500 RPM)

	Forward	Reverse
Working	0 - 10 mph (0 - 16 km/h)	
Roading	0 - 20 mph (0 - 32 km/h)	

Foot controlled forward and reverse pedal available as an option.



DIFFERENTIAL FINAL DRIVE

Positive traction differential consists of 4 bevel gears and automatic lock-up. Heavy-duty flanged sleeve construction is supported by tapered roller bearings, allowing fully floating, non-load carrying drive axles. A heavy-duty two-speed gearbox provides work and travel modes as well as a neutral position for towing.

Ground clearance..... 16" (406 mm)



WHEELS & TIRES

Front:	
Tire size	15 x 19.5, TL, G2
Ply rating (pr.)	8 pr.
Rim size	12.25" (311 mm)

Rear:	
Tire size	16.9 x 24, TL, Traction Lug
Ply rating (pr.)	6 pr.
Rim size	15" (381 mm)

Diamond Tread available as an option.



BRAKES

Service Brakes Foot Operated
Fade resistant, hydraulically actuated drum brakes effective on rear wheels. System features dual braking circuits for even braking on both sides of the grader. Includes reserve power assist and operator warning system (visual and audible).
Hydrostatic drive provides dynamic braking.
Parking Brakes Hand Operated
Independent, mechanically actuated drum brakes effective on rear wheels. System uses a cable equalizer to assure even engagement pressure on both sides. Includes visual and audible warning system for parking brake on.

All braking systems meet SAE Standard J1473 OCT 90, SAE Recommended Practice J1152 APR 80 and ISO 3450: 1985.



FRONT AXLE

Front axle type: fully welded steel truss, gusseted for torsional strength and rigidity. Single oscillation pin with replaceable pin supports.

Oscillation 35° up and down
Ground clearance 16" (406 mm)
Wheel lean (standard on C66A, optional on C60A) Hydraulic, 15° R or L



STEERING

Type Hydraulic power steering
Turning radius (outside front wheel)
-articulated frame (C60A) 13' 6"
(4 115 mm)

Leaning wheel option on C60A reduces turning radius by 18" (457 mm)
-articulated frame (C66A) 12' 0"
(3 658 mm)

Operating pressure 1000 PSI
(6 900 kPa)

Steering system operates from separate hydraulic pump.

C60A/C66A

FRAME

Rear 10" (254 mm)
heavy gauge box channel
Front Welded box type
Size 0.375" x 8" x 8"
(10 mm x 203 mm x 203 mm)
Full front and rear frame sections.

DRAWBAR

Main drawbar (solid) 4" (102 mm)
square
Cross bar (solid) 1" x 4"
(25 mm x 102 mm)
T-bar designed for maximum visibility and support. Connected to frame by shim-adjustable ball stud.

ARTICULATION JOINT

4" (102 mm) diameter pivot pins, turning on 4 tapered roller bearings. 2 hydraulic cylinders mounted with replaceable ball joints and dust shields.
Articulation angle 37°

MOLDBOARD ASSEMBLY

Size 5/8" thick x 19" high x 10' long
(16 mm x 483 mm x 3 048 mm)
Replaceable cutting edges
& end bits Two @ 5' x 6" x 0.5"
(1 524 mm x 152 mm x 13 mm)
Cut below ground 10" (254 mm)
Blade ground clearance 12" (305 mm)
Blade tilt positions 4
Hydraulic tilt available as an option.
Blade reach outside front tires:
- moldboard extended &
using hydraulic blade slide 46"
(1 168 mm) right or left
- articulated & extended 75"
(1 905 mm) right or left

CIRCLE ASSEMBLY

Size 37" (940 mm) outside diameter
Type full circle construction
Moldboard height controlled by two hydraulic cylinders connected to ball joints at turntable. Trunnion-mounted to frame with bearings and replaceable bushings. Circle centered with 3 adjustable alignment blocks with removable shims. Replaceable wearplate between circle and drawbar.

CAPACITIES

Fuel tank 25 gallon (95 L)
Hydraulic 30 gallon (114 L)
Coolant 4.5 gallon (17 L)
Final drive 4.5 gallon (17 L)
Final drive 3.8 gallon (14 L)

CIRCLE DRIVE

Circle rotation 120°
Twin hydraulic cylinder circle drive system uses direct acting hydraulic power permitting moldboard repositioning under full load. Permits moldboard to be repositioned within grader's width for travel. Circle turn cushion valve available as an option.

CAB & CONTROLS

All hydraulic controls are located on the fully adjustable steering pedestal. 8 low-effort, direct-acting hydraulic control levers are arranged in accordance with the industry standard for optimum operator convenience, visibility and comfort. Full hydraulic controls provide operation of circle turn, left and right blade lift and float control, articulation, moldboard slide, and optional leaning wheel and front blade/scarifier.

Pedestal instrument cluster: engine temperature gauge; engine oil pressure gauge; fuel level gauge; volt meter; tachometer.

A right hand console houses the transmission controller, throttle, hour meter, all electrical switches, heater controls and ignition switch.

HYDRAULICS

Standard "Single Flow" hydraulic system with feathering blade lift controls provides smooth response.

Hydraulic tank contains a temperature gauge and sight glass for fluid level checks. Operating pressure 1 800 PSI
(12 411 kPa)

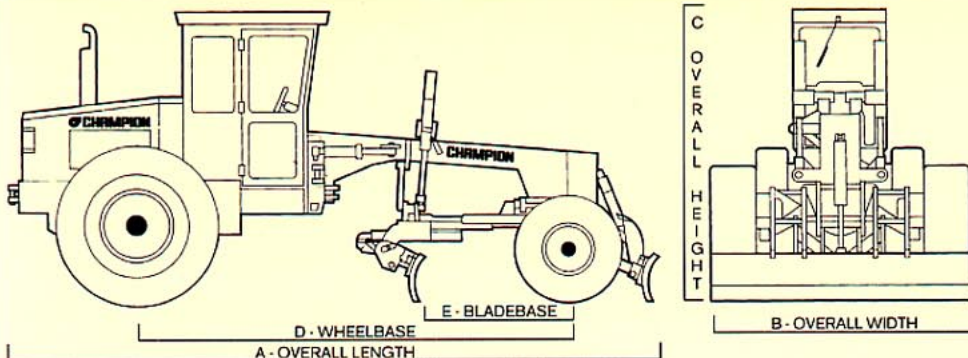
Single section gear pump 16 gpm
(61 lpm)

"Twin Flow" hydraulic system available as an option.

FILTERS

Transmission 10 micron
Hydraulic 33 micron spin-on type

DIMENSIONS



A Overall length
- scarifiers up 21' 0" (6 401 mm)
- scarifiers down 21' 6" (6 553 mm)
- without scarifiers 20' 8" (6 229 mm)

B Overall width
(with standard tires) 84" (2 184 mm)

C Overall height 9' 1" (2 769 mm)

D Wheelbase 15' 4" (4 674 mm)

E Blade base 6' 2" (1 880 mm)

C60A/C66A

C66A: ALL WHEEL DRIVE

C66A AWD operates in low range, forward and reverse speeds from 0 - 10 mph (0- 16 km/h).

Automatically disengages when the operator presses the brake pedal or shifts the transmission to neutral. All wheel drive provides optimum traction in all working conditions. System maintains equalized traction to both front wheels in turns and in all traction situations. Grader retains full front axle mobilities of oscillation and wheel lean.

AVAILABLE ATTACHMENTS

- Front mounted blade/scarifier
- Front mounted V-type scarifier
- Rear mounted ripper/scarifier
- Automatic Blade controls
- Windrow eliminator
- Hydraulic broom
- Front-end loader bucket
- Side dozer

STANDARD EQUIPMENT

- Cummins 4B3.9 80 HP (60 kW)
- Hydrostatic drive
- "Single Flow" hydraulic system
- Heavy-duty positive traction differential
- 2-speed rear axle gearbox with neutral position
- ROPS canopy, c/w fully adjustable control pedestal, low-effort, industry-standard controls, feathering-type blade lift controls
- 10' (3 048 mm) hydraulic sliding moldboard
- Hydraulically Boosted Dual Braking system with reserve power assist
- Power steering
- Hydraulic leaning front wheels (C66A)
- Ratchet-type park brake with operator warning alarm and indicator
- Gauges: engine temperature and oil pressure, Volt meter, fuel level, tachometer, hour meter
- moldboard float control valves
- Rear fenders
- Muffler
- 12 volt electrical system
- Back-up alarm
- Seat belt
- Steps and grab handles
- Lockable engine side panels
- Back up lights
- Front and rear directional, brake and tail lights and hazard lights
- 2 dual beam headlights
- Inside convex rear view mirror
- External lockable battery box



FRONT-MOUNTED BLADE (optional)

Size: 5/8" thick x 17" high x 7' long
(16 mm x 422 mm x 2 134 mm)
Blade ground clearance ... 16" (406 mm)
Replaceable, standard grader cutting edge.



SCARIFIERS (optional)

Number of teeth 4
Mounted on front blade. Replaceable tips.
Cutting depth: 6" (152 mm)
below blade
Cutting width: 43" (1 092 mm)

OPTIONAL EQUIPMENT

- "Twin flow" hydraulic system
- All Wheel Drive (available as C66A)
- Enclosed ROPS cab
- Cummins 4BT3.9 110 HP (82 kW)
- Hydraulic blade tilt
- Electronic blade controls
- Forward-Neutral-Reverse foot control pedal
- Foot pedal accelerator
- 7' 0" (2 133 mm) front-mounted blade
- Tires: Diamond Tread or Traction Lug
Front: 9.5 x 16
Rear: 16.9 x 24 or 18.4 x 26
- Cab heater
- Windshield defroster
- Beacon light
- Working lights
- Windshield wipers
- Windshield washers
- Air cleaner service indicator
- Outside rear view mirrors
- Rear glass in canopy
- Hydraulic leaning wheels

CHAMPION MOTOR GRADERS

A Company within the Volvo Construction Equipment Group

Goderich, Ontario, Canada

www.championroad.com

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Specifications subject to change without notice. Some items Included In this brochure are optional. Your safety and the safety of those around you depends on using care and judgement when operating and servicing your grader.

Do not operate the grader until you read and understand the warnings and instructions in the operator's manual.

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