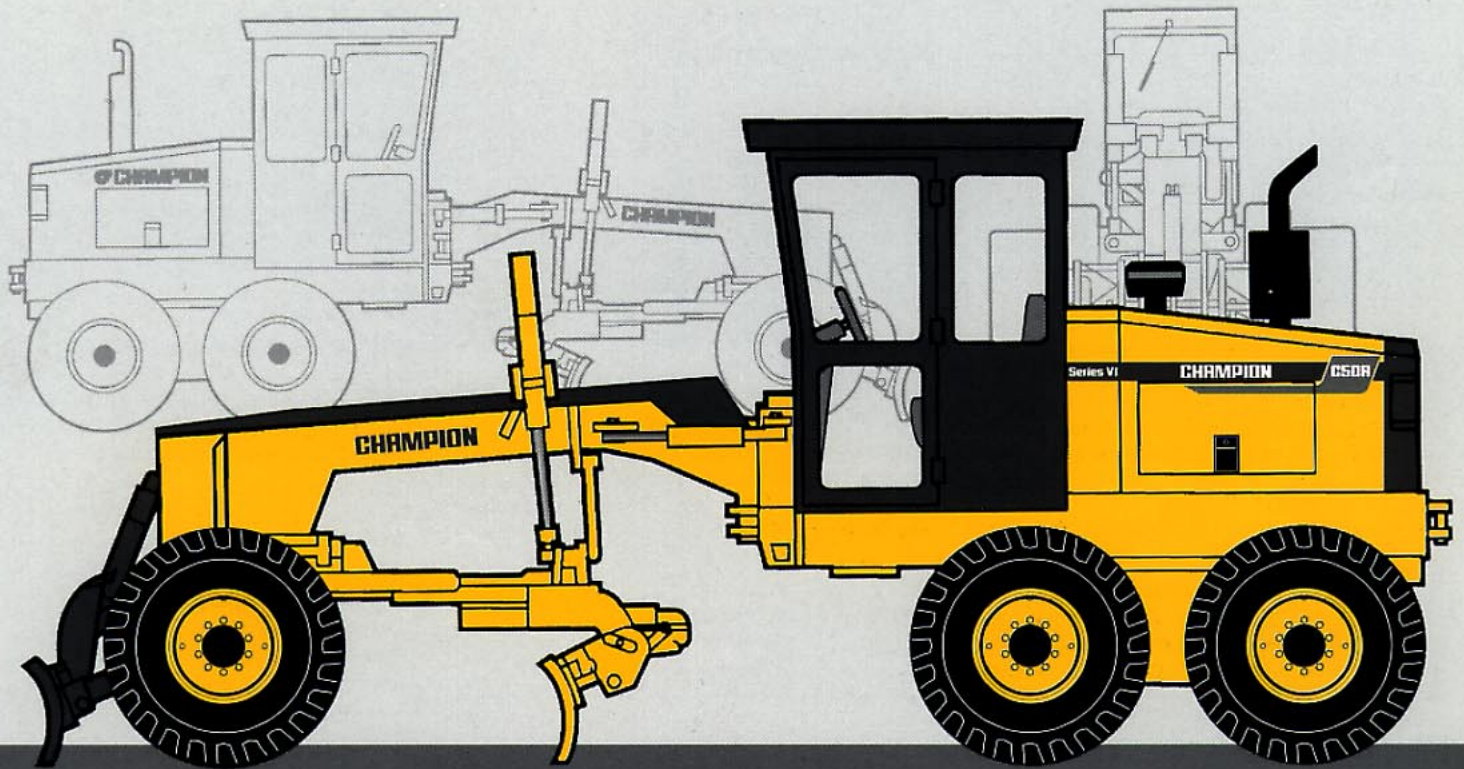


# Series VI

# CHAMPION C50A

## TANDEM DRIVE COMPACT MOTOR GRADER



### KEY FEATURES:

- Hydrostatic drive - infinitely variable ground speeds 0-15 mph / 0-24 km/h
- Low emission, high efficiency Cummins diesel
- Canopy or enclosed cab
- Tight turning radius - 12' 10" / 3 912 mm
- Dual lever speed and directional controls
- Hydraulic sliding moldboard
- Power steering

MODEL	C50A
Configuration	Tandem Drive
Operating Weight	9,420 lb. 4 273 kg
Engine	Cummins 4B3.9
Output (SAE J1349)	80 hp 60 kW

# CHAMPION<sup>®</sup> MOTOR GRADERS

A Company within the Volvo Construction Equipment Group

# C50A MOTOR GRADER SPECIFICATIONS

## OPERATING WEIGHTS

Total ..... 9,420 lbs. 4 273 kg  
 Front wheels ..... 2,900 lbs. 1 450 kg  
 Rear wheels ..... 6,520 lbs. 3 260 kg  
 Weights shown include ROPS canopy, all operating fluids and operator.

## ENGINE DATA

Make/Model ..... Cummins 4B3.9  
 Type ..... 4 cycle, naturally aspirated, diesel  
 No. of cylinders ..... 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)

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 J1349 standard conditions with water pump, lubricating oil pump and fuel system.

## TRANSMISSION

Type ..... Hydrostatic  
 Control ..... Dual lever speed & directional control  
 Mechanical neutral lockout with neutral start switch.  
 Operating pressure ..... 3000 PSI (20 700 kPa)  
 Maximum pressure ..... 5000 PSI (34 500 kPa)  
 Hydrostatic Drive provides infinitely variable control to the operator through the entire range of ground speeds. This permits very smooth increases or decreases in operating speeds, essential when fine grading. Rapid forward or reverse selection makes repetitive operations simpler.  
 SPEEDS (@ 2500 RPM)  
 Forward and Reverse ..... 0 -15 mph (0-24 km/h)

## FINAL DRIVE/TANDEMS

Positive traction tandem drive through heavy-duty, bi-directional hydrostatic drive motors. Differential action provides smoother turns, reduced tire scuffing, and offers excellent traction in low traction conditions. Tandems are fabricated steel box construction.  
 Tandem wall (inner & outer) ..... 0.5" (13 mm)  
 Drive chain pitch ..... 1.25" (32 mm)  
 Oscillation ..... +/- 30°

## WHEELS & TIRES

Tire size ..... 12 x 16.5  
 Ply rating (pr.) ..... 6 pr.  
 Rim width ..... 9.75" (248 mm)  
 Bolt-on rims front and rear.

## BRAKES

Hydrostatic drive provides dynamic braking.  
 Spring applied parking brake.

## 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)

## STEERING/TURNING RADIUS

Steering type ..... hydraulic power steering  
 Turning radius, (outside front wheel) frame articulated ..... 12'10" (3 912 mm)

## ARTICULATION

3" (76 mm) diameter pivot pins, turning on 4 tapered roller bearings. 2 hydraulic cylinders mounted with replaceable ball joints and dust shields.  
 Articulation angle ..... 37°

## FRAME

Rear: heavy gauge box channel ..... 8" (203 mm)  
 Front ..... Welded box type  
 Size .. 3/8" x 6" x 8" (10 mm x 152 mm x 203 mm)  
 Full front and rear frame sections.

## CIRCLE ASSEMBLY/DRIVE

Size ..... 31" (787 mm) outside diameter  
 Type ..... full circle construction  
 Circle centered with 3 adjustable alignment blocks with removable shims. Replaceable wearplate between circle and drawbar.  
 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 graders width for travel. Moldboard height controlled by two hydraulic cylinders connected to ball joints at turntable. Trunnion-mounted to frame with bearings and replaceable bushings.

## DRAWBAR

Main drawbar (solid) ..... 3" (76 mm) square  
 Cross bar (solid) ..... 1" x 4" (25 mm x 102 mm)  
 T-bar designed for maximum visibility and support. Connected to main frame with shim adjustable ballstud.

## MOLDBOARD ASSEMBLY

Size ..... 1/2" thick x 17" high x 10' long  
 (13 mm thick x 432 mm high x 3 048 mm long)  
 Replaceable cutting edges ..... 2 @ 5' x 6" x 1/2"  
 (2 @ 1 524 mm x 152 mm x 13 mm)  
 Blade ground clearance ..... 12" (305 mm)  
 Blade tilt positions (manual) ..... 4  
 Hydraulic blade tilt optional.  
 Blade reach outside front tires, using hyd. blade slide-moldboard extended .. 58" (1 473mm) R or L  
 -articulated/extended... 87" (2 210mm) R or L

## CONTROLS

Standard equipment includes six (6) direct acting control levers on the main manifold providing full hydraulic operation of circle turn, blade lift (2), front attachment, moldboard slide and articulation.  
 Operating pressure ..... 1 800 PSI (12 411 kPa)  
 Single section gear pump ..... 16 USgpm (60 lpm)  
 Hydraulic tank contains a temperature gauge and sight glass for fluid level checks. Instrument panel: engine temperature gauge; engine oil pressure gauge; fuel level gauge; volt meter; tachometer; hour meter.

## CAPACITIES / FILTERS

Fuel tank ..... 20 gallon (76 L)  
 Hydraulic ..... 30 gallon (114 L)  
 Coolant ..... 4.5 gallon (17 L)  
 Tandems (ea.) ..... 10 gallon (37 L)  
 Transmission filter ..... 10 micron  
 Hydraulic filter ..... 33 micron spin-on type

## STANDARD EQUIPMENT

- Cummins 4B3.9 80 HP (60 kW) diesel
- Hydrostatic drive
- Hydraulic sliding moldboard
- Power steering
- 12 volt electrical system
- Back-up alarm
- lockable engine side panels
- Seat belt
- Steps and grab handles
- Spring applied parking brake
- Gauges: engine temperature and oil pressure, voltmeter, fuel level, tachometer, hour meter
- 2 dual beam headlights
- 2 front and rear directional and hazard lights
- Back up lights
- Inside convex rear view mirror
- Muffler
- ROPS canopy

## FRONT-MOUNTED BLADE (optional)

Size ..... 1/2" thick x 14 1/2" high x 6' long  
 (13 mm thick x 368 mm high x 1 829 mm long)  
 Front blade ground clearance ..... 14" (356 mm)  
 Replaceable, standard grader cutting edge.

## SCARIFIER (optional)

Number of scarifier teeth ..... 4  
 Scarifier cutting depth ... 6" (152 mm) below blade  
 Scarifier mounted on front blade. Replaceable tips.

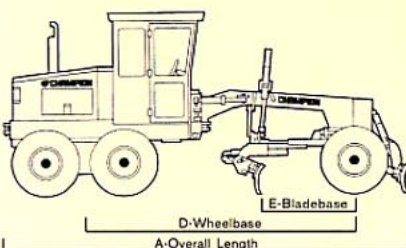
## OPTIONAL EQUIPMENT

- Cummins 4BT3.9 turbo 110 HP (82 kW)
- ROPS cab enclosure
- Forward-Neutral-Reverse foot control pedal
- Tilt steering wheel and controls
- Hydraulic blade tilt adjustment
- Foot pedal accelerator
- Cab heater
- Windshield defroster
- Beacon light
- Work lights
- Windshield wipers
- Independent moldboard floats
- Air cleaner service indicator
- FOPS installation for cab or canopy
- Outside mirrors

## AVAILABLE ATTACHMENTS

- 6' (1 829 mm) front-mounted blade
- 4 scarifiers mounted on front blade
- Side dozer

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.



## C50A DIMENSIONS

- A - Overall length .....18' 6" (5 639 mm)
- B - Overall width:  
 @ front tires .....5'10" (1 778 mm)  
 @ rear tires ..... 6' 8" (2 032 mm)
- C - Overall height  
 with cab .....8' 0" (2 432 mm)
- D - Wheelbase .....12' 6" (3 810 mm)
- E - Blade base ..... 6' 2" (1 880 mm)

# CHAMPION MOTOR GRADERS

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