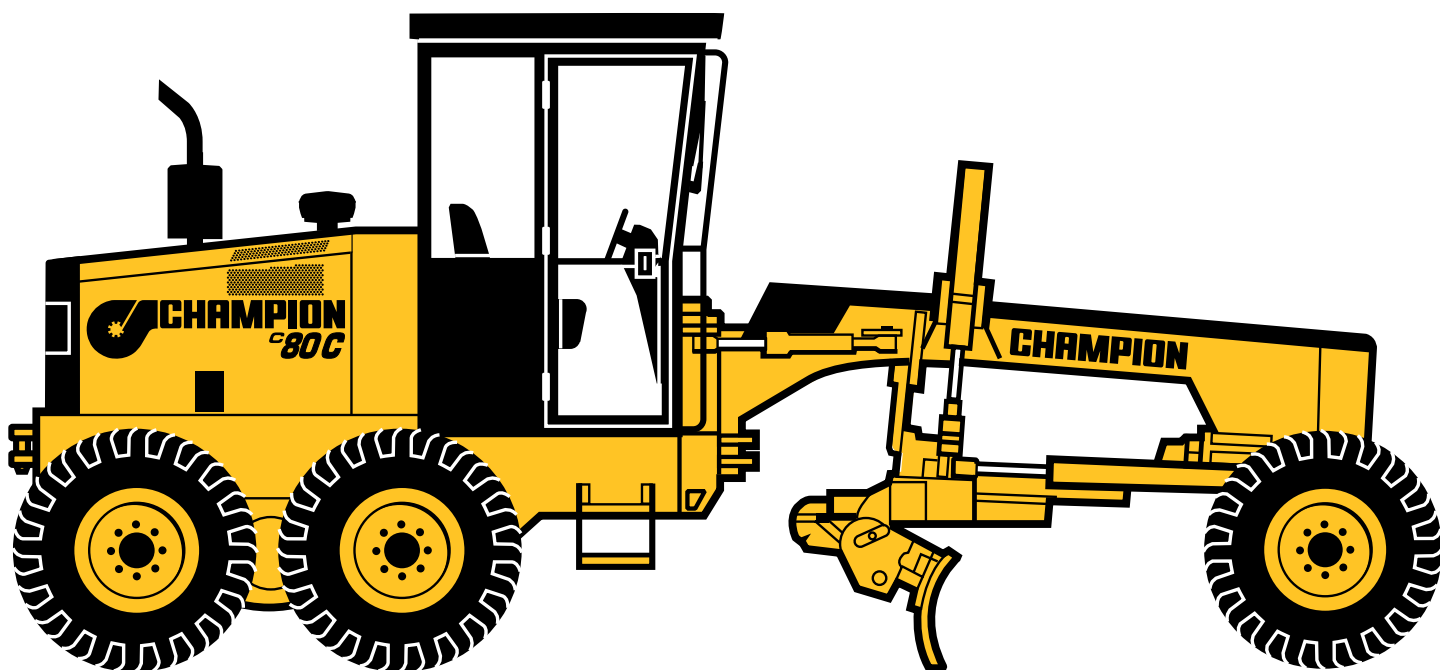


C80C / C86C



COMPACT MOTOR GRADERS

KEY FEATURES:

- Infinitely variable ground speeds 0-20 mph (0-32 km/h)
- ROPS/FOPS canopy or fully enclosed cab ROPS/FOPS
- Tight turning radius 19' (5 791 mm) from center to outside front tire (Fully articulated position)
- Full range of front and rear attachments
- Fully adjustable, low effort, operator friendly controls
- Tandem 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
- Hydraulic leaning front wheels

MODEL	C80 C	C86 C
Configuration	Articulated Frame Tandem Drive	Articulated Frame All Wheel Drive
Engine	Cummins QSB4.5 Tier 3	
Output (SAE J1349)	110 hp (82 kW)	
Operating Weight	15,000 lb (6 800 kg)	15,500 lb (7 030 kg)
Turning Radius	19' (5 791 mm)	



OPERATING WEIGHTS

C80 C

Total 15,000 lb (6 800 kg)
 Front wheels 5,010 lb (2 270 kg)
 Rear wheels 9,990 lb (4 530 kg)

C86 C

Total 15,500 lb (7 030 kg)
 Front wheels 5,290 lb (2 400 kg)
 Rear wheels 10,210 lb (4 630 kg)

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



ENGINE DATA

C80 C / C86 C Standard

Make/Model Cummins QSB4.5 Tier 3
 Type Turbocharged, charge air cooled diesel
 No. of cylinders In-line 4
 Bore & stroke 4.21" x 4.88" (107 mm x 124 mm)
 Displacement 275 cu. in. (4.5 L)
 Horsepower @ 2500 RPM 110 hp (82 kW)
 Peak torque @ 1500 RPM 360 lb.ft (489 N.m)
 Oil system capacity 2.75 gallon (11 L)

Engine equipped with a dual element, dry type air cleaner with evacuator. 12 volt starting and electrical system with 95 amp (1140 watt) alternator with 2 - 12 volt batteries, 650 CCA (cold cranking amps) each.

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



TRANSMISSION

Type Hydrostatic
 Control Dual lever speed and directional control

Transmission is "declutched" by brake pedal. Mechanical neutral lockout with neutral start switch.

Operating pressure 3,000 PSI (20 700 kPa)
 Maximum pressure 5,000 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
 Working range 0-10 mph (0-16 km/h)
 Rooding range 0-20 mph (0-32 km/h)

Foot controlled forward and reverse pedals available optionally.



DIFFERENTIAL / FINAL DRIVE

Positive traction differential consists of 4 bevel gears and automatic lock/unlock. 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 10" (254 mm)



TANDEMS

Tandems are fabricated steel box construction.

Wall thicknesses
 - inner & outer 0.625" (16 mm)
 Drive chain pitch 1.5" (38 mm)
 Oscillation +/-15°



WHEELS & TIRES

Tire size 15 x 19.5, TL, G-2
 Ply rating (PR) 8
 Rim size 12.25" (311 mm)
 Bolt-on type



BRAKES

Service Brakes Foot operated
 Fade resistant, hydraulically actuated disc brakes effective on all four rear wheels.

Braking system operates from a separate hydraulic pump and features dual 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 disc brakes effective on all four rear wheels. System uses a cable equalizer to assure even engagement pressure on both discs. Includes visual and audible warning system for parking brake engaged.

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 tubular design for maximum strength and rigidity. Moving points supported by a combination of tapered roller bearings and replaceable bushings for long life and easy maintenance.

Wheel lean Hydraulic, 15° R or L
 Oscillation 35°
 Ground clearance 22" (558 mm)



STEERING

Type Hydraulic power steering
 Turning radius (outside front wheel)
 - articulated frame 19' (5 791 mm)
 - straight frame 25' (7 620 mm)
 Operating pressure 1,200 PSI (8 275 kPa)

Braking and steering systems operate from a separate hydraulic pump.



FRAME

Rear 12" (305 mm)
heavy gauge box channel
Front..... welded box type
Size 0.5" x 8" x 8"
(13 mm x 203 mm x 203 mm)
Full front and rear frame sections.



ARTICULATION

4" (102 mm) diameter shaft supported by 4 tapered roller bearings. 2 hydraulic cylinders with clevis style mounting supported on spherical bearings.
Articulation angle 24°



CIRCLE ASSEMBLY

Size 39" (991 mm) outside diameter
Type full circle construction
Moldboard height controlled by two hydraulic cylinders connected to ball joints at turntable. Each trunnion is mounted to the frame by dual tapered roller bearings in sealed housings. Circle centered with 3 adjustable alignment blocks with removable shims. Replaceable wearplate between circle and drawbar.



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.



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.



MOLDBOARD

Size 10' x 21" x 5/8"
(3 048 mm x 533 mm x 16 mm)
Replaceable cutting edges
& end bits - 2 6'x 6" x 0.5"
(1 829 mm x 152 mm x 13 mm)
5'x 6" x 0.5"
(1 524 mm x 152 mm x 13 mm)
Cut below ground..... 17" (432 mm)
Blade ground clearance 16" (406 mm)
Blade tilt angle,
hydraulically powered..... 45°
Blade reach outside front tires:
- moldboard extended using blade slide
right or left..... 36" (915 mm)
Optional circle sideshift cylinder available for increased blade mobility.
- moldboard extended using blade slide
and circle sideshift
right or left..... 44" (1 120 mm)



CAPACITIES

Fuel tank 39 gallon (148 L)
Hydraulic 30 gallon (114 L)
Coolant 5 gallon (19 L)
Tandems (each)..... 18 gallon (68 L)
Final drive..... 4.5 gallon (17 L)



CAB & CONTROLS



All hydraulic controls are located on the fully adjustable steering pedestal. Ten 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, moldboard tilt, leaning wheel, front blade/scarifier, and optional circle side shift and front/rear attachments.

Pedestal instrument cluster: Engine temperature gauge; engine oil pressure gauge; fuel level gauge; volt meter; tachometer; warning lights; hour meter. Right and left hand consoles house the transmission controller, throttle, all electrical switches, heat/AC controls and ignition switch.



HYDRAULICS

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

Hydraulic tank contains a temperature gauge and sight glass for fluid level checks.

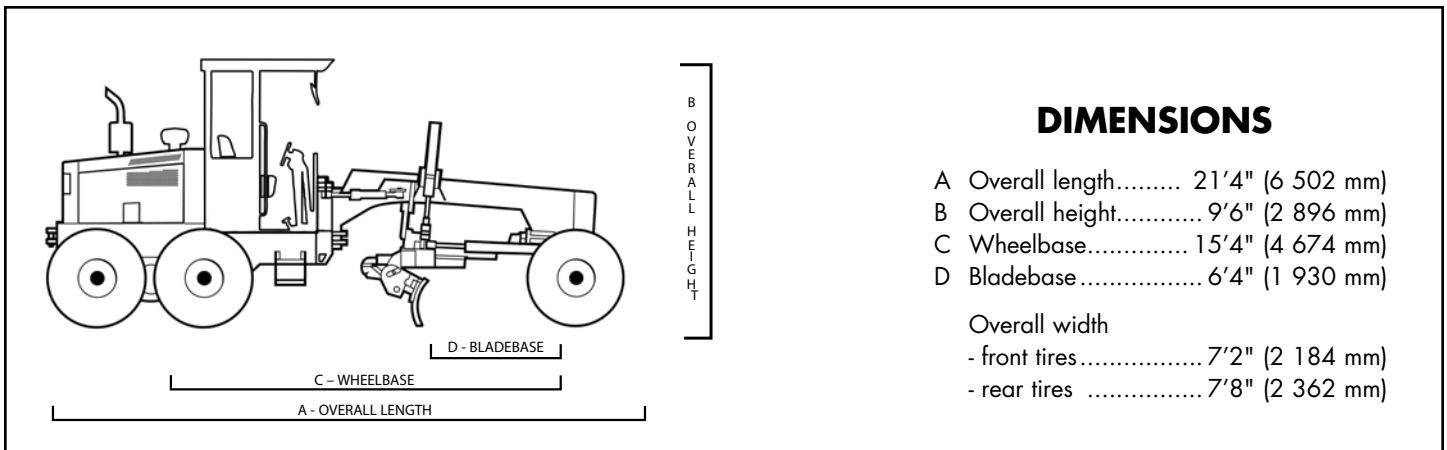
Operating pressure 1,800 PSI
(12 411 kPa)
Single section gear pump 16 gpm
(61 lpm)

"Twin Flow" hydraulic system available as an option.



FILTERS

Transmission 10 micron
Hydraulic 25 micron spin-on type





C86 C ALL WHEEL DRIVE

C86 C 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.

AUTOMATIC BLADE CONTROL SYSTEMS

All Champion Motor Graders are compatible with the latest in Automatic Blade Control (ABC) Technology.

Brackets Package

Moving an existing ABC system to a new Champion Grader, a Bracket Package can be designed and installed during the fabrication process eliminating need for aftermarket brackets and unnecessary welding at the dealer or onsite, making installation of existing system cleaner and faster.

Hydraulics Package

Installing a new ABC system? Factory installation of a MOBA Valve Package at time of fabrication, will eliminate need to open machine's hydraulic system, greatly reducing the opportunity of accidental contamination. Combine this with the Brackets Package to just "plug and play" your existing or new Automatic Blade Control System.

Factory Installed Systems

Champion can factory install most any brand of ABC system at the time of the new grader order. Champion works closely with ABC manufacturers to ensure a quality installation.

ATTACHMENTS

- Counter Weight
- Front Mounted 7' (2 134 mm) Blade/Scarifier
- Front Mounted 8' (2 438 mm) Blade/Scarifier
- Front Mounted "V" Scarifier
- Rear Mounted Rippifier
- Rotary Broom
- Side Dozer
- Windrow Eliminator
- Compaction Roller
- Plate Tamper

STANDARD EQUIPMENT

- Cummins QSB4.5 Tier 3 110hp (82 kW)
- Hydrostatic drive
- Heavy duty positive traction differential
- 2 speed rear axle gearbox with neutral position
- ROPS/FOPS canopy c/w fully adjustable control pedestal, low effort, industry standard controls, feathering type blade lift controls with float – 10' (3 048 mm) hydraulic sliding moldboard c/w hydraulic tilt
- Hydraulically Boosted Dual Braking System with reserve power assist
- Power steering
- Suspension seat
- Hydraulic leaning front wheels
- 15 x 19.5 grader tires
- Ratchet type park brake with operator warning alarm and indicator
- Gauges: engine temperature and oil pressure, volt meter, fuel level, hour meter
- Muffler
- 12 volt electrical system
- Backup alarm
- Seatbelt
- Steps and grab handles
- Lockable engine side panels
- Backup 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
- 8 bank hydraulic manifold



FRONT MOUNTED BLADE (optional)

- With scarifier teeth
- Size7' x 17" x 5/8" (2 134 mm x 422 mm x 16 mm)
- 8' x 17" x 5/8" (2 438 mm x 422 mm x 16 mm)
- Blade ground clearance 16" (406 mm)
- Replaceable, standard grader cutting edge
- Number of teeth4
- Mounted on front blade. Replaceable tips
- Cutting depth6" (152 mm) below blade
- Cutting width..... 43" (1 092 mm)
- Optional front blade float

OPTIONAL EQUIPMENT

- All Wheel Drive (available as C86 C)
- Automatic Blade Control
- Enclosed ROPS cab with FOPS protection
- Moldboards
 - 11' x 21" x 5/8" (3 353 mm x 533 mm x 16 mm)
 - 12' x 21" x 5/8" (3 658 mm x 533 mm x 16 mm)
- Hydraulic circle sideshift
- Electronic blade controls
- Forward-Neutral-Reverse foot control pedal
- Foot pedal accelerator
- 7' (2 134 mm) Front Mounted Blade with scarifiers
- 8' (2 438 mm) Front Mounted Blade with scarifiers
- "Twin Flow" hydraulic system
- Cab heater
- Windshield defroster
- Beacon light
- Working lights
- Windshield wipers
- Windshield washers
- Air cleaner service indicator
- Outside rear view mirrors
- Rear or side glass in canopy
- AM/FM CD stereo w/2 speakers
- Air conditioning

- 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.
- Under our policy of continuous product development and improvement, we reserve the right to change specifications and design without prior notice. The illustrations do not necessarily show the standard version of the machine.



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