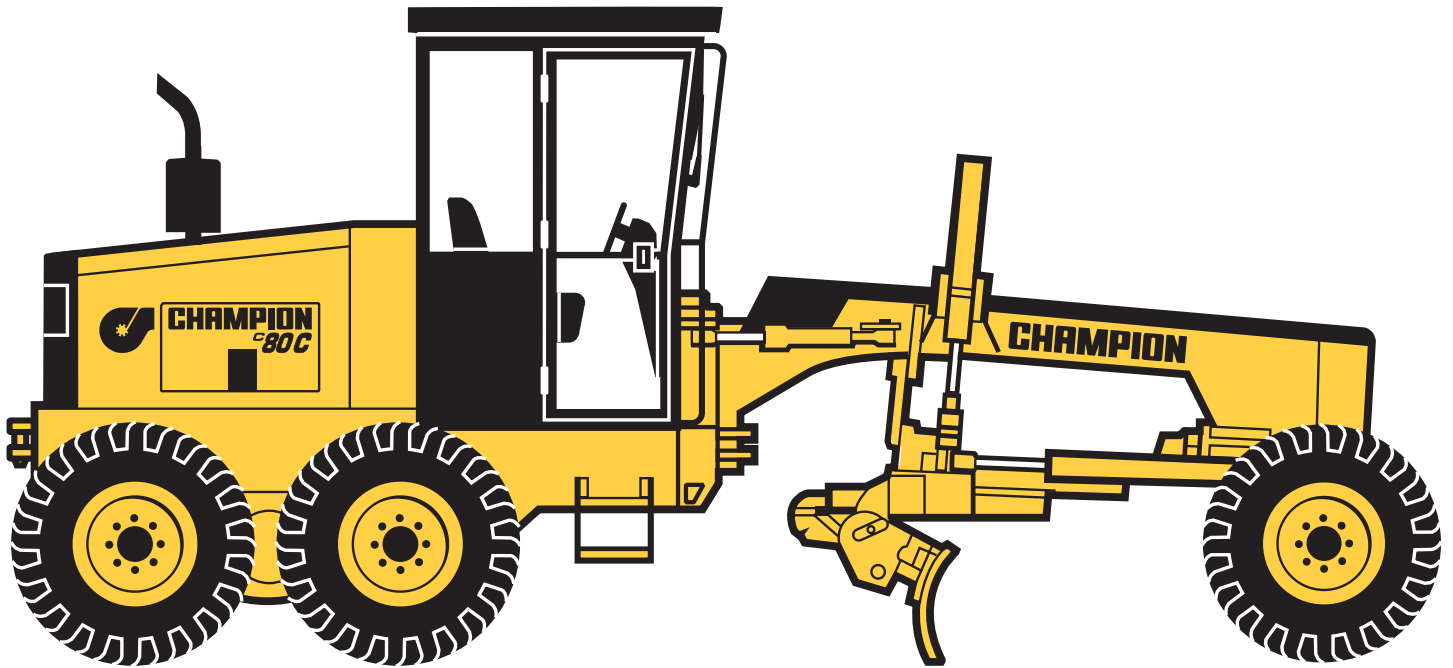


C80C / C86C



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 4B3.9	Cummins QSB4.5-30T
Output (SAE J1349)	80 hp (60 kW)	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

Total15,000 lb (6 800 kg)
 Front wheels5,010 lb (2 270 kg)
 Rear wheels9,990 lb (4 530 kg)

C86 C

Total15,500 lb (7 030 kg)
 Front wheels5,290 lb (2 400 kg)
 Rear wheels10,210 lb (4 630 kg)

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



ENGINE DATA

C80 C

Make/ModelCummins 4B3.9
 Type4 cycle, naturally aspirated, diesel
 No. of cylinders4
 Bore & stroke4.02" x 4.72"
 (102 mm x 120 mm)
 Displacement239 cu in (3.92 L)

Horsepower @
 2500 RPM85 hp (63 kW)

C86 C

Make/ModelCummins QSB4.5-30T
 Type4 cycle, turbocharged, diesel
 No. of cylinders4
 Bore & stroke4.02" x 5.42"
 (102 mm x 138 mm)
 Displacement275 cu in (4.5 L)

Horsepower @
 2500 RPM110 hp (82 kW)

Engine equipped with a dual element, dry type air cleaner with evacuator. 12 volt starting and electrical system with 95 amp (1 140 watt) alternator.

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

Optionally available on C80 C:
 110 hp (82 kW) Cummins QSB4.5-30T turbocharged diesel engine.



TRANSMISSION

Type.....Hydrostatic
 Control.....Dual lever speed and directional control

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

Operating pressure3,000 PSI
 (20 700 kPa)
 Maximum pressure5,000 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 range0-10 mph
 (0-16 km/h)
 Rooding range0-20 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 & outer0.625" (16 mm)
 Drive chain pitch1.5" (38 mm)
 Oscillation+/-15°



WHEELS & TIRES

Tire size15 x 19.5, TL, G-2
 Ply rating (PR)8
 Rim size12.25" (311 mm)
 Bolt-on type



BRAKES

Service BrakesFoot 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 BrakesHand 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: Steel tube design for maximum strength and rigidity. Oscillation and steering pins are supported by spherical bearings for maximum life.

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



STEERING

Type.....Hydraulic power steering
 Turning radius (outside front wheel)

- articulated frame19' (5 791 mm)
 - straight frame.....25' (7 620 mm)
 Operating pressure1,200 PSI
 (8 275 kPa)

Braking and steering systems operate from separate hydraulic pumps.



FRAME

Rear12" (305 mm)
heavy gauge box channel
Frontwelded box type
Size0.5" 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

Size39" (991 mm) outside diameter
Typefull 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.



CIRCLE DRIVE

Circle rotation120°
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

Size10' x 21" x 5/8"
(3 048 mm x 533 mm x 16 mm)
Replaceable cutting edges
& end bits - 26'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 clearance16" (406 mm)
Blade tilt angle,
hydraulically powered45°
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 left44" (1 120 mm)



CAPACITIES

Fuel tank39 gallon (148 L)
Hydraulic30 gallon (114 L)
Coolant4.5 gallon (17 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.

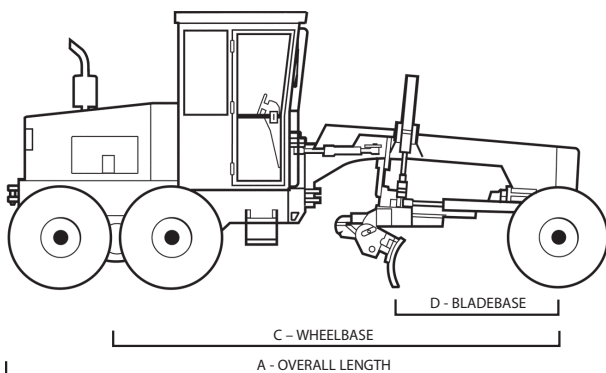
Operating pressure1,800 PSI
(12 411 kPa)
Single section gear pump16 gpm
(61 lpm)

"Twin Flow" hydraulic system available as an option.



FILTERS

Transmission.....10 micron
Hydraulic25 micron spin-on type



DIMENSIONS

A Overall length..... 20'10" (6 350 mm)
B Overall height9'6" (2 896 mm)
C Wheelbase15'4" (4 674 mm)
D Bladebase6'4" (1 930 mm)
Overall width
- front tires7'2" (2 184 mm)
- rear tires7'8" (2 362 mm)



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.

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

Hydrostatic drive
Heavy duty positive traction differential
2 speed rear axle gearbox with neutral position
ROPS canopy, with FOPS protection, 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 clearance16" (406 mm)
Replaceable, standard grader cutting edge
Number of teeth4
Mounted on front blade. Replaceable tips
Cutting depth6" (152 mm)
below blade
Cutting width43" (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
Cummins 4BT3.9 turbo diesel 110 hp (82 kW) (C80 C)
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
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
"Twin Flow" hydraulic system

- 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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