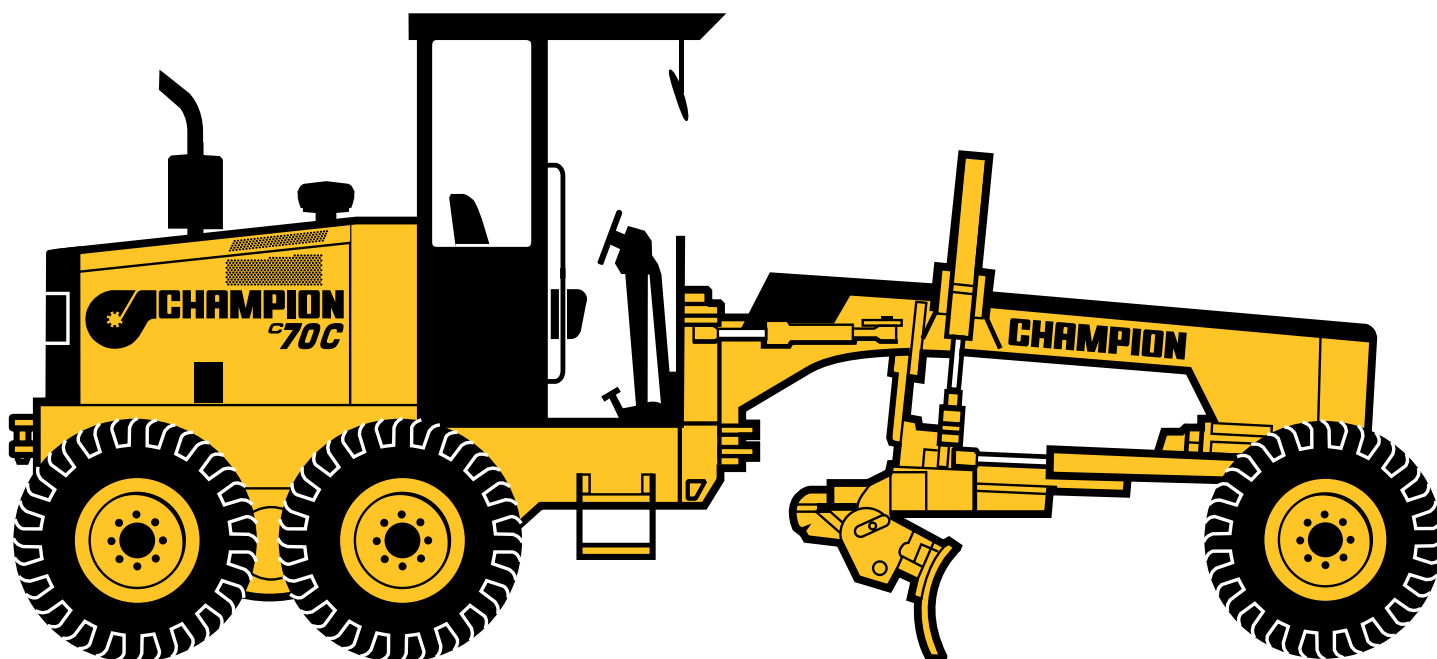


# C70C



## 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 21' (6 400 mm)
- Full range of front and rear attachments
- Fully adjustable, low effort, operator friendly controls
- Tandem 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
- Low emission, high efficiency Cummins diesel engine

MODEL	C70 C
Configuration	Articulated Frame Tandem Drive
Engine	Cummins QSB4.5 Tier 3
Output (SAE J1349)	110 hp (82 kW)
Operating Weight	13,050 lb (5 919 kg)
Turning Radius	21' (6 400 mm)



## OPERATING WEIGHTS

### C70 C

Total ..... 13,050 lb (5 919 kg)  
 Front wheels ..... 3,920 lb (1 778 kg)  
 Rear wheels ..... 9,130 lb (4 141 kg)



## ENGINE DATA

### C70 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 ..... 1.25" (32 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 truss, gusseted for torsional strength and rigidity. Single oscillation pin with replaceable pin supports.  
 Wheel lean ..... Hydraulic, 15° R or L  
 Oscillation ..... 35° up and down  
 Ground clearance ..... 16" (406 mm)



## STEERING

Type ..... Hydraulic power steering  
 Turning radius (outside front wheel)  
 - articulated frame ..... 21' (6 400 mm)  
 - straight frame ..... 27'6" (8 382 mm)  
 Operating pressure ..... 1,200 PSI (8 275 kPa)  
 Braking and steering systems operate from a separate hydraulic pump.



## 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.



## ARTICULATION

4" (102 mm) diameter pivot pins, turning on 4 tapered roller bearings. 2 hydraulic cylinders mounted with clevis style mounting supported on spherical bearings.  
Articulation angle ..... 24°



## 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. 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 19" x 5/8"  
(3 048 mm x 483 mm x 16 mm)  
Replaceable cutting edges  
& end bits - 2 ..... 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 option  
Blade reach outside front tires:  
- moldboard extended using hydraulic blade slide right or left ..... 36" (915 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. Eight 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, leaning wheel, front blade/scarifier, and optional blade tilt.

Pedestal instrument cluster: Engine temperature gauge; engine oil pressure gauge; fuel level gauge; volt meter; tachometer; indicator and warning lights; hour meter. Right hand consoles houses the transmission controller, throttle, all electrical switches, heater 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)

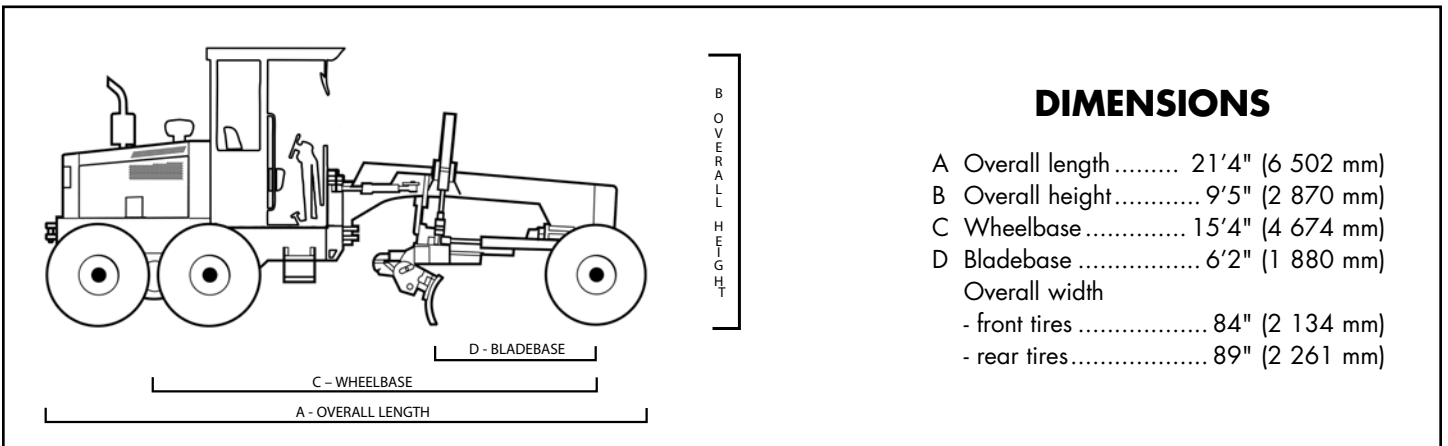
Single section gear pump ..... 16 gpm  
(61 lpm)

"Twin Flow" hydraulic system available as an option.



## FILTERS

Transmission ..... 10 micron  
Hydraulic ..... 25 micron spin-on type



## ATTACHMENTS

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

## 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.

## STANDARD EQUIPMENT

Cummins QSB4.5 Tier 3  
110 hp (82 kW)  
Hydrostatic drive  
"Single Flow" hydraulic system  
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 – 10' (3 048 mm) hydraulic sliding moldboard  
Hydraulically Boosted Dual Braking System with reserve power assist  
Power steering  
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, tachometer, hour meter  
Moldboard float control valves  
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



## FRONT MOUNTED BLADE (optional)

With scarifier teeth  
Size .....7' x 17" x 5/8"  
(2 134 mm x 432 mm x 16 mm)  
8' x 17" x 5/8"  
(2 438 mm x 432 mm x 16 mm)  
Blade ground clearance ..... 16" (406 mm)  
Replaceable, standard grader cutting edge  
Number of teeth ..... 4  
Mounted on front blade. Replaceable tips  
Cutting depth ..... 6" (152 mm)  
below blade  
Cutting width..... 43" (1 092 mm)  
Optional front blade float

## OPTIONAL EQUIPMENT

Enclosed ROPS cab with FOPS protection  
Hydraulic blade tilt  
Forward-Neutral-Reverse foot control pedal  
Foot pedal accelerator  
7' (2 134 mm) Front Mounted Blade with 4 tooth scarifiers  
8' (2 438 mm) Front Mounted Blade with 4 tooth scarifiers  
"Twin Flow" hydraulic system  
Cab heater  
Defroster fan  
Beacon light  
Working lights  
Windshield wipers  
Windshield washers  
Air cleaner service indicator  
Outside rear view mirrors  
Rear or side glass in canopy  
Hydraulic leaning wheels  
Suspension seat  
AM/FM CD Player  
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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