

# MOTOR GRADERS

Series C  
GR 865C

**CASE**  
CONSTRUCTION



## ENGINE

Model	FPT 6.7L
Type	Electronic common rail fuel system, Water cooled, 4 Cycle, Direct injection, Open combustion chamber, Turbocharged, Charge air cooled.
	Tier IV
Cylinders	6
Bore/Stroke	4.09in x 5.17 in (104 mm x 132 mm)
Displacement	409 Cubic Inch (6.7 liters)
<b>Horsepower at 2.200 rpm</b>	
<b>Gross (SAE J1995 Gross)</b>	
Low Curve	144 kW (193 hp)
Mid Curve	153 kW (205 hp)
High Curve	164 kW (220 hp)
<b>Net (SAE J1349)</b>	
Low Curve	133 kW (178 hp)
Mid Curve	142 kW (190 hp)
High Curve	153 kW (205 hp)
<b>Maximum torque at 1.500 rpm</b>	
<b>Gross (SAE J1995 Gross)</b>	
Low Curve	612 ft.lb (830 Nm)
Mid Curve	649 ft.lb (880 Nm)
High Curve	686 ft.lb (930 Nm)
<b>Net (SAE J1349)</b>	
Low Curve	548 ft.lb (743 Nm)
Mid Curve	581 ft.lb (788 Nm)
High Curve	615 ft.lb (832 Nm)

## POWERTRAIN

<b>Rear axle</b>	
Vertical ground clearance	14.9" (380 mm)
Differential	
* Brakes	
Number of disks per brake	
<b>Tandem</b>	
Type	Welded Plate (2204 x 631 x 200.5 mm)
Oscillation	20° in each direction
Command chain pitch	50.8 mm
Thickness of the internal and external side wall	19 mm
<b>Front axle</b>	
Type	CNH LA
Oscillation	15°
Wheel lean	20°
Vertical ground clearance	22.8" (580 mm)
* SAE J150 3450 (brake performance)	

## HYDRAULIC SYSTEM

Type	Piston pump, variable displacement Pressure and flow compensated, Load sensing
Hydraulic pump	Rexroth
Rated flow	49.0 GPM (186 LPM) @ 2200 RPM
Control valve	HUSCO, LOAD SENSING 9 SECTIONS

## TRANSMISSION

Brand / Model	ZF TC LOCK UP 6WG-160
Type	Full power shift torque converter Shift modulation, downshift protection, reversals inhibited, Parking brake 15" (380 mm) dry disk, Electronic shift control mounted in R.H. console, 24V bump shifter control.
Gears	6 Forward 3 Reverse
Speeds - km/h	Forward Reverse
1st	5.2 4.9
2nd	3.3 2.0
3rd	2.1 0.8
4th	1.4 -
5th	0.5 -
6th	0.6 -

## ELECTRICAL SYSTEM

Power	24 V
Alternator	BOSCH - 90 A
Batteries	2x100 Ah - low maintenance

## STEERING

Type	Hydrostatic power steering
Steering wheel turns (lock to lock)	4.5 turns (fast); 3.2 turns (slow)
Pump capacity	11.1 GPM (41.8 LPM) @ 2200 engine RPM
Pressure	22530 PSI (175 bar) Integral with priority valve
Cylinders	2

## ARTICULATION

Type	Hydraulic actuated (with lock valve)
Angle	25° left/right
Controls	Hydraulic

## CAPACITIES (REFILL)

Engine with and w/o filter	16/15 lt
Fuel DEF (urea refill)	360 lt
Transmission with and w/o filter	25/26 lt
Engine water cooling system	16 lt
Hydraulic oil tank	90 lt
Total hydraulic system	148 lt
Rear axle center	44 lt
Tandem case (each)	42 lt

## SADDLE

Locking system	Two cylinders actuated by an electric solenoid. Control valve regulated by a pressure reducing valve @ 600 psi (4137 kPa).
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## FRAME

Type	Box section
Size - Rear section	327 x 220.5 mm
Size - Front section	298 x 258 mm

## DRAWBAR

Type	"A" frame welded construction with center mounted circle turn motor. Shim adjustable at ball and circle
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## CIRCLE

Type	Welded construction
Maximum outside diameter	69.0" (1752.6 mm)
Rotation/Speed	360°/ 1.2 RPM (7.2 degrees per second)
Rated hydraulic flow	
N° of supports in phenolic resin	4

## BLADE/MOLDBOARD

Type	Standard
Form	involute curve
Width	3658 mm / 3962 mm / 4267 mm
Height (curved profile)	622 mm
Thickness	875" (22mm)
Cutting edge	2 interchangeable
Blade pitch positions - Normal pitch	47°
Minimum pitch	42°
Maximum pitch	87°

Blade side shift	
Right	49.5" (1257 mm)
Left	43.5" (1105 mm)
Maximum bank-cutting angle (left and right)	90°
Ground penetration (max.)	28" (711.2 mm)
Lift above ground (max.)	17.5" (444.5 mm)
Blade side shift and pitch	Hydraulic type

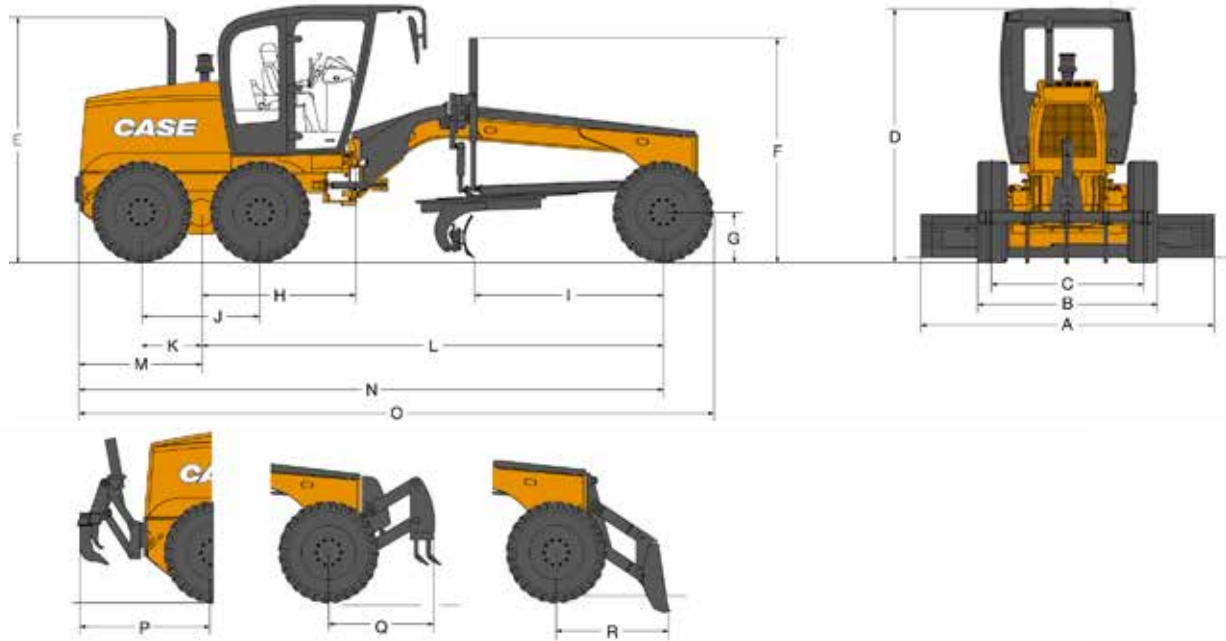
## REAR RIPPER

Type	Parallelogram
Cutting width	86.4" (2195 mm)
Ripper teeth	3/5 optional
Scarifier teeth	5/9 optional
Lift above ground - Ripper teeth	20.38" (518 mm)
Maximum penetration - Ripper teeth	17.22" (437 mm)

## 865C OPERATING WEIGHT

With a 3658 mm blade, operator weigh 75 kg, full tank

865C VHP	Weight (kg)
Basic machine	15481
Front counterweight	492



All units fitted with 14.0 x 24-12L tires, open ROPS/FOPS cab, standard battery, full fuel tank, operator weighing 75 kg, specifications in accordance with ISO 7134.

## DIMENSIONS

	865C VHP
A Blade width	3962 mm
B Tread width (single rim)	2495 mm
C Tread gauge (single rim)	2074 mm
D Height on top of the cab	3200/3400 mm
E Height of top of exhaust	3323 mm
F Height to top of blade lift cylinder	3047 mm
G Tire static radius	610 mm
H Distance between tandem center and the frame articulation pin	1958 mm
I Distance between the front axle and the blade	2562 mm
J Distance between the center of the rear tires	1572 mm
K Distance between tandem center and the wheel	786 mm
L Wheelbase	6219 mm
M Distance between tandem center and the rear part of the equipment	2064 mm
N Distance between the front wheel axle and the rear part of the equipment	7868 mm
O Overall length	8957 mm
P Distance between the rear tires and the ripper	2028 mm
Q Distance between the front tires and the scarifier	1520 mm
R Distance between the front tires and the dozer blade	1626 mm
Turning radius (outside the tires)	7250 mm

## STANDARD EQUIPMENT

### OPERATOR STATION

ROPS/FOPS open cab with:  
Adjustable suspension vinyl seat, with a 50.8 mm (2") seatbelt  
Adjustable operator console  
Pedal accelerator  
Manual accelerator  
Front windshield wiper with washer  
Safety glass  
Ceiling light  
Internal and external rear-view mirrors  
12 V (\*) power supply  
Automatic master switch  
Steps on the right and left sides  
(\*) Only available in closed cabins

### ENGINE 865C

FPT 6.7 lt  
Turbocharged, diesel  
Dry air filter with primary and secondary safety elements  
Air pre-filter with cyclonic dust ejector  
90 A alternator  
Swing-up hood, diesel

### HYDRAULIC SYSTEM

Hydraulic system with load sensor, closed center  
9-section control valve  
Hydraulic control for all functions:  
blade lifting (right and left side), circle turn, side shift of the circle, wheel lean, frame articulation, blade side shift and pitch, front and rear accessories  
Diagnostics center with 8 quick couplers  
Hydraulic axial piston pump  
Hydraulic engine fan

### BRAKES

Multidisk oil-bathed service brakes with nitrogen accumulator safety system  
Disk parking brake integrated into the transmission with warning light

### TIRES

14" 3-pieces rim / 17,25 x 25

### OTHERS

Standard tool kit  
Drawbar / Standard circle

### AXLES

Conventional differential with brakes on 4 wheels and differential locking with electrohydraulic mechanism (rear axle)

### STEERING

Hydrostatic steering with integrated emergency system

### INSTRUMENTS

Electronic Information Center  
Indicators/gauges:  
Tachometer  
Direction selected F/N/R  
Transmission modes - automatic/manual  
Selected gear  
Engine cooling temperature  
Fuel level  
Transmission oil temperature  
Hydraulic oil temperature  
Hourmeter  
Fuel consumption  
Engine diagnostics  
Transmission diagnostics

### INDICATOR LIGHTS:

Low fuel level  
Floodlights  
High beam  
Brake pressure  
Main alert  
Parking brake

### SOUND ALERTS:

Warning alert  
Emergency alert  
Reversing alert

### ELECTRICAL SYSTEM

Lights  
Front headlight with direction indicators (2)  
Rear brake light and direction indicators (2)  
Rear work light on top of the cabin (2)  
Front work light on top of the cabin (2)  
24 V system (Two 12 V batteries 12 V / 750 CCA)  
Electronic system monitoring  
Horn  
Hourmeter  
Reverse alarm

### TRANSMISSION

ZF transmission of torque conversion type with lock up (also functions as Direct Drive), Powershift, 6 forward speeds and 3 reverse speeds, automatic gear shift, emergency electrical failure device (Limp-Home)

All ROPS/FOPS cabins are certified in accordance with the SAE J1040 (ROPS) and SAE J231 (FOPS) standards.

## OPTIONS\*

### OTHERS

Air conditioner for closed cab  
Fire extinguisher  
Windshield washer and lower windshield wipers  
Rear windshield washer and wipers  
Radio  
Tandem lock device  
Rear fogger

### DRAWBAR

Drawbar / Heavy Duty circle

### FRONT ATTACHMENT

Front counter weight  
Lighting on dozer blade

### BLADE

3,658 x 622 x 22 mm blade  
3,962 x 671 x 22 mm blade  
4,267 x 671 x 22 mm blade  
-304.8 mm right blade extension  
-304.8 mm left blade extension

### REAR ATTACHMENT

Medium ripper with 3 large teeth and 5 small teeth  
2 additional large teeth and 4 additional small teeth  
Rear pull hook  
Support for lifting the machine

### WORK LIGHTS

2 work lights behind the blade  
2 work lights mounted in front of the moldboard  
2 work lights on the front attachment

### OPTIONAL EXTRAS

Revolving safety light  
Luxury toolbox  
Toolbox without tools, with support, mounted on the rear frame  
Slow movement symbol  
Electric pump for filling tires  
Support for spare tire

### TIRES AND MOUNTED RIMS

#### TUBELESS TIRES

9" Rim - single piece/14x24 tire  
10" Rim - 3 pieces / 14x24 tire  
13" Rim - single piece / 17.5x25 tire  
14" Rim - 3 pieces / 17.5x25 tire

#### RADIAL TUBELESS TIRES

10" Rim - 3 piece / 14x24 tire  
XGLA2 RADIAL

#### RIMS

9" Rim - single piece with valve  
10" Rim - 3 pieces with valve  
13" Rim - single piece with valve  
14" Rim - 3 pieces with valve

\*All the options are subject to the local availability.



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NOTE: Standard and optional fittings can vary according to the demands and specific regulations of each country. The illustrations may include optional rather than standard fittings - consult your Case dealer. Furthermore, CNH Industrial reserves the right to modify machine specifications without incurring any obligation relating to such changes.

Conforms to directive 2006/42/EC

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