

**MOTOR GRADER  
865B VHP**

**CASE**  
CONSTRUCTION



**GRADER THAT GIVES  
UNLIMITED LEVELLING**

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**EXPERTS FOR THE REAL WORLD**  
**SINCE 1842**

# B-SERIES MOTOR GRADER

## SPEC SHEETS

### ENGINE

Brand..... FPT  
Model..... F4HE9687C  
Type..... Electronic Common Rail fuel System,  
Water Cooled, 4 Cycle, Direct Injection,  
Turbocharged and Charge Air Cooled.  
(EPA TIER 3 certified.)  
Cylinders..... 6, in line  
Bore x stroke ..... 104 x 132 mm  
Engine displacement..... 6.7 l

#### Horsepower at 2200 RPM

##### Gross (SAE J1995 Gross)

Low curve..... 193 hp (144 kW)\*  
Medium curve..... 205 hp (153 kW)\*\*  
High curve..... 220 hp (164 kW)\*\*\*  
Net (SAE J1349)

Low curve ..... 178 hp (133 kW)\*  
Medium curve..... 190 hp (142 kW)\*\*  
High curve ..... 205 hp (153 kW)\*\*\*

#### Maximum torque at 1500 RPM

##### Gross (SAE J1995 Gross)

Low curve..... 830 Nm\*  
Medium curve..... 880 Nm\*\*  
High curve..... 930 Nm\*\*\*  
Net (SAE J1349)  
Low curve..... 743 Nm\*  
Medium curve..... 788 Nm\*\*  
High curve..... 832 Nm\*\*\*

Note:

\* 1st and 2nd Gears / \*\* 3rd and 4th Gears / \*\*\* 5th and 6th Gears

### POWERTRAIN

#### Rear axle

Vertical ground clearance..... 380 mm  
Differential ..... Hydraulic Lock

#### Brakes

Number of discs per brake..... 5

#### Tandem

Type..... Welded Plate  
Oscillation..... 20° in each direction

#### Front axle

Type..... High-resistance welded steel  
Oscillation..... 20° in each direction  
Wheel lean..... 15.3° in each direction  
Vertical ground clearance..... 622 mm  
Tyres..... 14 x 24 12L-G2 tubeless  
Rims..... 9" X 24" (single piece)

### TRANSMISSION

Model..... ZF TC LOCK UP 6WG – 160  
Type..... Powershift, electronic shift change control.  
Torque converter, automatic lockup.

Gears..... 6 forward / 3 reverse

Self-diagnostic system..... On board

Speeds - km/h	Forward	Reverse
1 <sup>st</sup>	5.4	5.5
2 <sup>nd</sup>	8.1	13.1
3 <sup>rd</sup>	12.4	30.3
4 <sup>th</sup>	19.2	-
5 <sup>th</sup>	28.7	-
6 <sup>th</sup>	44.1	-

### CIRCLE

Type..... Welded construction  
Maximum outside diameter..... 1.752,6 mm  
Rotation..... 360°  
Speed..... 1.2 rpm (7.2°/second)  
Drive..... Hydraulic  
Type..... Motor reductor  
Displacement..... 0,25 l/turn  
Rated hydraulic flow..... 75 l/min  
N° of supports in phenolic resin..... 4

### STEERING

Type..... Hydrostatic  
Steering angle ..... 42°  
Steering wheel turns (lock to lock)..... 4.75  
Pump capacity at 2200 RPM..... 41.8 l/min  
Pressure release valve integrated  
with the priority steering valve..... 151 bar  
Cylinders..... 2  
Supplemental steering..... Integrated

### ARTICULATION

Type..... Hydraulically activated  
(with a lock system)  
Angle ..... 25° to the left/right  
Controls..... Hydraulic

### FRAME

Type..... All-welded box

#### Front section

Size..... 254 x 298 mm  
Weight..... 172.8 kg/m

#### Rear section

Size..... 121 x 299 mm  
Weight..... 84 kg/m

### DRAWBAR

Type..... "A" frame welded construction  
with center mounted turn motor  
Connection with the frame..... Shim adjustable spherical joint  
Saddle..... 5 positions

### HYDRAULIC SYSTEM

Type..... Closed center, load sensing  
Hydraulic pump..... Piston pump, variable displacement  
Pressure and flow compensated  
Rated flow..... 186 L/min at 2200 RPM  
Control valve..... 9 sections  
Quick couplers for diagnostics..... 8

### ELECTRICAL SYSTEM

Power..... 24 V  
Alternator..... 90 A  
Batteries..... 2x100 Ah – low maintenance

#### 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  
Electronic system monitoring

# B-SERIES MOTOR GRADER

## SPEC SHEETS

### REFILL CAPACITIES

Engine.....	17.5 l
Engine with a change in filter.....	18.5 l
Fuel.....	341 l
Transmission.....	25 l
Transmission with a change in filter.....	26 l
Engine water cooling system.....	40 l
Hydraulic oil tank.....	90 l
Rear axle centre.....	44 l
Circle turn housing.....	2.8 l
Tandem case (each).....	69 l

### BLADE

Form.....	Involute curve
Width.....	3.962 mm
Height (curved profile).....	671 mm
Thickness.....	22 mm
Cutting edge.....	2, interchangeable

#### Blade side shift

Right.....	686 mm
Left.....	533 mm
Maximum bank-cutting angle (left and right).....	90°
Ground penetration (max.).....	711.2 mm
Lift above ground (max.).....	444.5 mm
Blade side shift and pitch.....	Hydraulic type

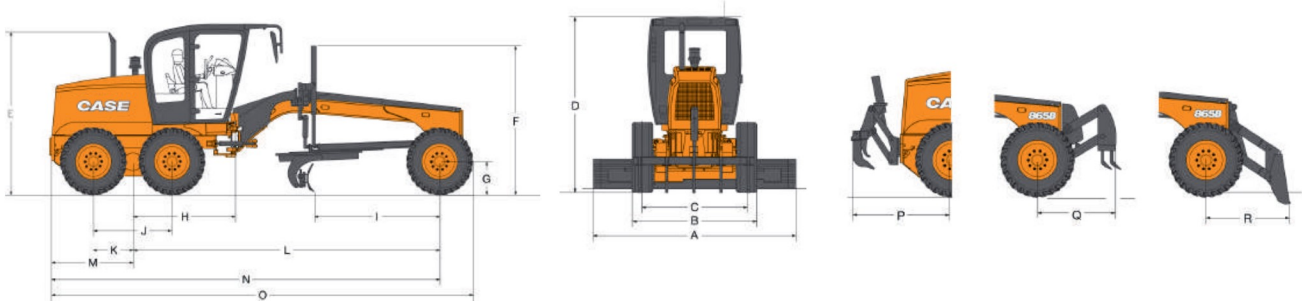
### OPERATING WEIGHT

Standard equipment with standard blade,  
full fuel tank, coolant, lubricants and operator.

#### 865B VHP

Front axle	4.600 kg
Rear axle	10.730 kg
Machine	15.330 kg
Blade load	8.341 kg

### GENERAL DIMENSIONS



<b>A Blade width</b>	3.962 mm
<b>B Tread width</b>	2.452 mm
<b>C Tread gauge</b>	2.106 mm
<b>D Height to top of cab</b>	
High-profile cab	3.340 mm
Low-profile cab	3.140 mm
<b>E Height of top of exhaust</b>	3.323 mm
<b>F Height to top of blade lift cylinder</b>	3.047 mm
<b>G Tyre static radius</b>	610 mm
<b>H Distance between tandem center and the frame articulation pin</b>	1.958 mm
<b>I Distance between the front axle and the blade</b>	2.562 mm
<b>J Distance between the center of the rear tyres</b>	1.572 mm
<b>K Distance between tandem center and the wheel</b>	786 mm
<b>L Wheelbase</b>	6.219 mm
<b>M Distance between tandem center and the rear part of the equipment</b>	1.650 mm
<b>N Distance between the front wheel axle and the rear part of the equipment</b>	7.869 mm
<b>O Overall length</b>	8.534 mm
<b>P Distance between the rear tyres and the ripper</b>	2.028 mm
<b>Q Distance between the front tyres and the ripper</b>	1.520 mm
<b>R Distance between the front tyres and the dozer blade</b>	1.626 mm
Turning radius (outside the tyres)	7.250 mm
Ground clearance – rear axle	380 mm
Ground clearance – front axle	622 mm

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



## STANDARD

### 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 sunshade (front and rear)
- (\*) Only available in closed cabins

### ENGINE

- Turbocharged, diesel
- Dry air filter with primary and secondary safety elements
- Air pre-filter with cyclonic dust ejector
- Alternator
- Swing-up hood

### 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
- Movable saddle with 5 service positions and hydraulic lock
- Blade
- 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

### TYRES

- 9" single piece rim / 14 x 24 - 12L - G2 tubeless

### OTHERS

- Drawbar / Standard circle

### AXLES

- "Differential lock" torque differential

### 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
- Diagnostics DeClutch activation indicator
- 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 with 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

### CAB

- Air conditioned closed cabin

### SCARIFIER

- Type: Front mounted
- Cutting width: 1.168 mm
- Teeth: 5
- Spacing between teeth: 229 mm
- Lift above ground: 527 mm
- Maximum penetration: 318 mm
- Weight: 570 kg

### REAR RIPPER - 865B VHP

- Type: Parallelogram
- Cutting width: 2.185 mm
- Ripper teeth: 5
- Lift above ground 505 mm
- Maximum penetration 350 mm
- Weight: 640 kg

### REAR RIPPER & SCARIFIER 865B VHP

- Teeth base: ripper 3 + scarifier 5
- Lift above ground
- Ripper teeth: 518 mm
- Scarifier teeth: 703 mm
- Maximum penetration
- Ripper teeth: 437 mm
- Scarifier teeth: 252 mm
- Weight: 795 kg (845B)
- Weight: 850 kg (865B)

### DOZER BLADE

- Type: Front mounted
- Width: 2.762 mm
- Height: 953 mm
- Lift above ground: 622 mm
- Penetration: 165 mm
- Weight: 1165 kg

Standard and optional equipment shown can vary by country.

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**NOTE: CASE provides specific outfits for various countries and many optional fittings (OPT). The illustrations on this or other leaflets may relate to standard or optional fittings. Please consult your CASE dealer for any information in this regard and any possible updating on components. CNH Industrial reserves the right to modify machine specifications without incurring any obligation relating to such changes.**

