

**MOTOR GRADER
865B VHP**

CASE
CONSTRUCTION



**GRADER THAT GIVES
UNLIMITED LEVELLING**

CaseCE.com
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 (164kW)***

Net (SAE J1349)

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

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 st	5.4	5.5
2 nd	8.1	13.1
3 rd	12.4	30.3
4 th	19.2	-
5 th	28.7	-
6 th	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

OPERATING WEIGHT

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

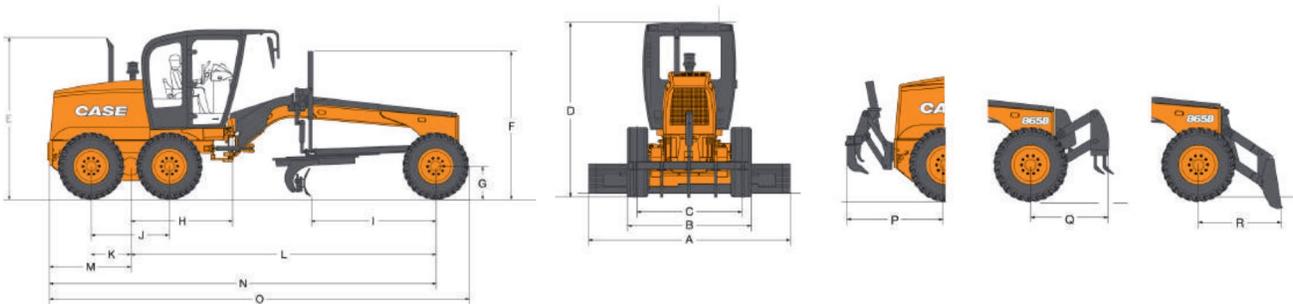
BLADE

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

GENERAL DIMENSIONS



	865B VHP
Front axle	4.600 kg
Rear axle	10.730 kg
Machine	15.330 kg
Blade load	8.341 kg

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

Corporate Identity Number: U29240DL1998PTC344616
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