

# 865B VHP MOTOR GRADER TIER 3 CERTIFIED

### **ENGINE - VHP**

Model	Case/FPT 6.7 L,
	Tier 3 certified
	Compliant with EPA regulations
	effective January 2011
	Electronic control
Туре	4-stroke, turbocharged
	and air to air cooled
Cylinders	6, in-line
Bore/Stroke	4.09 in x 5.17 in
	(104 mm x 132 mm)
Displacement	409 in³ (6.7 L)
Fuel injection	Common rail
Fuel	Diesel
Cooling	Liquid
Variable horse	power @ 2200 RPM - SAE J1995:
Gross	193/205/220 hp (144/153/164 kW)
Net	178/190/205 hp (133/142/153 kW)
Maximum tord	que @ 1500 RPM:

612/649/686 ft·lbs (830/880/930 N·m)

### **POWERTRAIN**

Rear axle	Graziano, planetary
Differential	Hydraulic lock,
	operator controlled
Inboard brakes	Wet disc
Number of discs / brake	5
Brake surface area	2,220 in <sup>2</sup>
	(14 326 cm²)
Tandems:	
Type	Welded plate
Oscillation	20° each way
Front axle	High strength,
	welded steel
Oscillation	15.3° each direction
Wheel lean	20° left/right
Tires (standard)	14.0 x 24 12PR
,	TL G2 Firestone
Rims	1-piece
9 in x	24 in (227 x 610 mm)

### **HYDRAULICS**

Type	Closed cent	ter, load sensing	
Hydraulic pump:			
Load sensing piston pump, variable displacement, pressure and flow compensated			
Rated flow @ 2	200 RPM	49 gpm	
		(187 L/min)	
Control valve		9 section	
Side shift and p	itch	Hydraulic	
Saddle		5 positions	
Diagnostic quic	k couplers	8	

### **TRANSMISSION**

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Direct drive countershaft powershift w/ electronic shift control and inching pedal

Pump flow @ 2200 RPM:

·	29.5 gpm (112 L/min)
Sump	Integral
Speeds	8 forward / 4 reverse
Shifting	Single lever, bump style automatic electronic control

Onboard
2.2 (3.6)
3.2 (5.1)
4.4 (7.2)
6.2 (10.0)
8.9 (14.3)
12.4 (20.0)
17.7 (28.5)
26.6 (42.9)
2.2 (3.6)
4.4 (7.2)
8.9 (14.3)
17.7 (28.5)

### **ELECTRICAL**

Voltage	24 Volts,
-	negative ground
Alternator	90 amp
Batteries (2)	Low-maintenance
	1010 CCA - 100 Ah (20 hr rate)
Lighting:	

Lighting:

Headlights (2); Turn signals, front/rear; Stop/tail (2); Rear mounted floods (2); Front mounted floods (2)

Backup alarm Standard

### **STEERING**

Type	Hydrostatic power steering
Turns (lock-to-lock	) 4.75
Pump capacity @ 2	2200 engine RPM:
	11.1 gpm (41.8 L/min)
Relief pressure	2,200 psi (151 bar)
	integral with priority valve
Cylinder (2):	

2.0 in bore x 11.85 in stroke x 1.0 in rod dia. (50.8 mm x 301.0 mm x 25.4 mm)

Supplemental steering Integral

### **ARTICULATION**

Туре	Hydraulic actuated
	(with lock valve)
Range	25° left/right
Controls	Hydraulic

### **SERVICE CAPACITIES**

Engine	4.4 gal (17.5 L)
w/ filter change	4.7 gal (18.5 L)
Fuel	90 gal (341 L)
Transmission	5.0 gal (23 L)
w/ filter change	6.6 gal (25 L)
Radiator	10.5 gal (40 L)
Hydraulic reservoir	24 gal (90 L)
Hydraulic system	50.2 gal (190 L)
Circle gearbox	3 qt (2.8 L)
Rear axle center	11.6 gal (44 L)
Total axle	11.6 gal (44 L)
Tandem case, each	15.9 gal (60 L)

### **MAINFRAME**

Туре	All welded box
Front section:	
Size	10.0 in x 11.73 in (254 x 298 mm)
Weight	124.7 lbs·ft (172.8 kg/m)
Rear section:	
Size	4.75 in x 11.75 in (121 x 299 mm)
Weight (each side)	55.6 lbs·ft (84.0 kg/m)

### **DRAWBAR**

Type:	
-------	--

"A" frame welded construction with center mounted circle turn motor

Ball and circle Shim adjustable

### **MOLDBOARD**

Туре	High-carbon steel
Shape	Involute curve
Length	14 ft 0 in (3962 mm)
Height	23.6 in (600 mm)
Thickness	0.875 in (22 mm)
End bits	2, interchangeable
Blade pitch positions:	
Normal pitch	47°
Minimum pitch	42°
Maximum pitch	87°
Blade shift:	
Right	27.0 in (686 mm)
Left	21.0 in (533 mm)
Max. bank cutting angle:	
(right and left)	90°
Ground penetration (max.)	28 in
	(711.2 mm)
Lift above ground (max.)	17.5 in
	(444.5 mm)

### **CIRCLE**

Type	Welded construction
Diameter:	
Max. outside	69.0 in (1752 mm)
Vertical member	63.0 in (1600 mm)
Rotation	360°
Speed	1.2 RPM (7.2°/second)
Drive	Hydraulic motor
Type	Roller Geroter
Displacement	15.26 in <sup>3</sup> /Rev.
	(0.25 L/Rev.)
Rated hydraulic flow	19.8 gpm
	(75 L/min)

### **OPERATING WEIGHT**

With 14 ft (4.27 m) moldboard, 17.5-25 tires, front counterweight, 175 lb (79 kg) operator and full fuel:

	33,796 lb (15 330 kg)
Weight, front axle	10,141 lb (4600 kg)
Weight, rear axle	23,655 lb (10 730 kg)
Blade pressure	20,626 lb (9356 kg)

### **ATTACHMENTS**

### **SCARIFIER**

Туре	Front mounted
Width of cut	46 in (1168 mm)
Teeth	5 (11 optional)
Tooth spacing	9.0 in (229 mm) (4.5 in optional)
Lift above ground	20.75 in (527 mm)
Max. penetration	12.5 in (318 mm)
Weight (includes fr	1,256 lb (570 kg) ont attachment group)

### **PUSH BLOCK**

Туре	Front mounted
Weight	1,084 lb (492 kg)

### **REAR RIPPER**

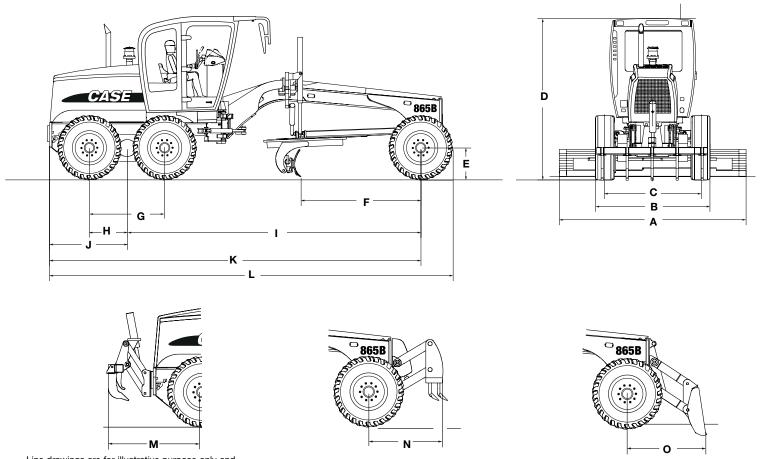
Type	Parallel
Ripper teeth	3 (5 optional)
Scarifier teeth	5 (9 optional)
Width of cut	86.4 in (2195 mm)
Lift above ground:	
Ripper teeth	20.38 in (518 mm)
Scarifier teeth	27.67 in (703 mm)
Max. penetration:	
Ripper teeth	17.22 in (437 mm)
Scarifier teeth	9.43 in (252 mm)
Weight	2,167 lb (985 kg)

### **DOZER BLADE**

Type	Front mounted
Width	109 in (2762 mm)
Height	37.5 in (953 mm)
Lift above ground	24.5 in (622 mm)
Penetration	6.5 in (165 mm)
Weight (includes from	2,568 lb (1165 kg) t attachment group)

### **COUNTERWEIGHT**

Type	Front mounted
Weight	1,084 lb (492 kg)



### Line drawings are for illustrative purpose only and may not be exact representation of unit.

### **DIMENSIONS**

		865B VHP
<b>A.</b> BI	Blade width	14 ft 0 in (3962 mm)
<b>B.</b> Di	stance between outside edges of tires	8 ft 2.3 in (2452 mm)
C. W	Vheel tread (Rim 9 x 24 - one piece rim)	6 ft 10.9 in (2106 mm)
<b>D.</b> H	leight to top of cab — high profile	10 ft 11 in ( 3340 mm)
<b>D.</b> H	leight to top of cab — low profile	10 ft 4 in ( 3150 mm)
E. Ti	ire radius — when static	2 ft 0 in ( 610 mm)
F. BI	Blade base	8 ft 5 in (2562 mm)
<b>G.</b> Di	sistance between tandem axles	5 ft 2 in (1594 mm)
<b>H.</b> Di	stance between tandem center and wheel	2 ft 7 in (797 mm)
l. W	Vheelbase	20 ft 5 in (6219 mm)
J. Di	sistance between tandem center and rear end of machine	5 ft 5 in (1650 mm)
K. D	sistance between front axle and rear end of machine	25 ft 10 in (7869 mm)
L. O	Overall length (without ripper or front attachment)	28 ft 0 in (8534 mm)
M. D	Distance between rear tires & rear ripper	6 ft 8 in (2028 mm)
N. D	Distance between front tires & front scarifier	5 ft 0 in (1520 mm)
<b>O.</b> D	Distance between front tires & front dozer blade	5 ft 4 in (1626 mm)
0	Outside tire turning radius	23 ft 9 in (7250 mm)
G	Ground clearance (rear axle)	14.9 in (380 mm)
G	Ground clearance (front axle)	24.5 in (622 mm)

All units equipped with 14.0 x 24-10 PR tires, ROPS cab with heater & A/C, std. battery, full fuel, 175 lb (79 kg) operator. Specifications per ISO 7134.

### STANDARD EQUIPMENT

### **OPERATOR STATION**

ROPS / FOPS cab (SAE J231, ISO 3449)

Adjustable operator's console

Adjustable cloth suspension seat with

3 in (76 mm) retractable seat belt

Safety glass

Dome light

Inside rear view mirror

Outside rear view mirrors

Cup holder

Storage tray

12-volt outlet

Radio ready (12 Volt)

Electrical master switch, automatic

Heater/defroster/pressurizer

Air conditioner

Sound suppression

Cab doors - left/right

Steps - left/right

Steering wheel

Windshield wipers, front and rear

Windshield washer, front

Window defroster, rear

### **POWERTRAIN**

Hydraulic differential lock

### ENGINE

Case/FPT 6.7 L turbocharged diesel

Tier 3 certified

Temperature controlled cooling fan

Charge air cooler

Air intake grid heater

Common rail electronic fuel injection

Hydraulic-driven cooling fan

Auto idle

### **HYDRAULICS**

Closed center, load sensing hydraulic system

Controls for all functions

9 section control valve

Hydraulic moldboard side shift and pitch

5-position saddle

14 ft x 23.6 in (4267 x 600 mm) moldboard

Rear pull hook

8 hydraulic diagnostic quick couplers

#### TIRES

14.0 x 24-12 PR

### **INSTRUMENTS**

Analog displays/Gauges:

Fuel level; Engine coolant temperature; Transmission oil temperature; Hydraulic oil temperature

### INSTRUMENTS (continued)

Monitor Functions:

Hour meter; Engine speed; Travel speed; Current gear selection: FNR indication: Clock; Trip computer; Fuel consumption; Fuel level percentage; Oil pressure; Coolant temperature; Engine oil temperature; Transmission oil temperature; Hydraulic oil temperature; Turbocharger air temperature; Differential lock indicator; Gear selection indicator; Engine diagnostics; Transmission diagnostics; System voltage; Error reporting; Warning prompts; Indicator warning lamps: main warning, parking brake, low brake pressure, high beams, turn signals, hazard lights, low fuel

### ELECTRICAL

Heavy duty batteries (2) 1010 CCA

**Electronic Systems Monitor** 

Horn

Alternator, 90 amp

Backup alarm

Headlights

Turn signals (2) front

Tail lights (2) with turn signals, brake lights

Flood lights - cab mounted

### **OPTIONAL EQUIPMENT**

### **MOLDBOARDS**

12 ft x 22 in (3658 x 559 mm), involute curve 13 ft x 23.6 in (4267 x 600 mm), involute curve

Extensions - 2 ft (610 mm)

Front Float Control

Moldboard Float Control

Lift cylinder/side shift accumulators

Lift cylinder accumulators

### **OPERATOR STATION**

High profile ROPS/FOPS cab

Front windows - openable

Lower front wiper/washers

Rear windshield washer Air suspension seat

Radio, AM/FM with CD player

Sunshade

### **TIRES**

13.0 x 24-12 PR

14.0 x 24-10 PR

14.0 x 24-12 PR

14.0 x R24 XGLA 14.0 x R24 Snoplus

16.0 x 24-12 PR

17.5 x 25-12 PR

17.5 x 25-16 PR

17.5 x R25 XTLA

17.5 x R25 Snoplus

### **ELECTRICAL**

Front mounted working lights (2)

Floodlights (2) at moldboard

Floodlights (2) at articulation

Snow wing lighting package

### OTHER

Bi-directional engine cooling fan

Cold weather package

Fire Extinguisher

Strobe Light

Tool Box (w/o tools)

Deluxe Tool Box (w/ tools)

Tire inflator kit

Spare wheel

Spare wheel support

Slow moving vehicle sign

### **ATTACHMENTS**

Front pull hook

Front counterweight

Front dozer blade

Front scarifier

Front push plate

Front support and lift cylinder

Rear ripper

## CASE Customer

NOTE: All specifications are stated in accordance with SAE Standards or Recommended Practices, where applicable.

NOTE: All engines are compliant with current EPA emissions requirements.

IMPORTANT: Case Construction Equipment Inc. reserves the right to change these specifications without notice and without incurring any obligation relating to such change. Case Construction Equipment Inc. does not warrant the safety or reliability of attachments from other manufacturers.

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Biodiesel<sub>2</sub>

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