

GRADER

845B VHP / 865B VHP

CASE

CONSTRUCTION



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THE CUTTING EDGE**

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GRADER

845B VHP / 865B VHP

ENGINE

Brand	845B VHP	865B VHP
Model	F-4HE9694L	F4HE9697C
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 2,200 rpm	
Gross (SAE J1995 Gross)	
Low Curve	150 hp (112 kW)*
Medium Curve	205 hp (153 kW)**
High Curve	173 hp (129 kW)**
Net (SAE J1349)	
Low Curve	140 hp (104 kW)*
Medium Curve	190 hp (142 kW)**
High Curve	163 hp (119 kW)**

Maximum torque at 1,500 rpm

Gross (SAE J1995 Gross)

Low Curve	659 Nm*	830 Nm*
Medium Curve	758 Nm**	880 Nm**
High Curve	591 Nm*	758 Nm**
Net (SAE J1349)		
Low Curve	591 Nm*	743 Nm*
Medium Curve	678 Nm**	788 Nm**
High Curve		832 Nm***

Note: 845B VHP - * 1st and 2nd Gears/ ** 3rd, 4th, 5th and 6th Gears
865B VHP - * 1st and 2nd Gears/ ** 3rd and 4th Gears/ *** 5th and 6th Gears

POWERTRAIN

Rear axle	
Vertical ground clearance	Limited slip
Differential	380 mm
Brakes	Disk, bathed in oil
Tandem	5

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	580 mm
Tires	14 x 24 12L-62, biasless
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

	845B VHP	865B VHP	845B VHP	865B VHP
1 st	5.0	5.4	5.3	5.5
2 nd	7.7	8.1	12.5	13.1
3 rd	11.8	12.4	28.6	30.3
4 th	18.2	19.2	-	-
5 th	27.2	28.7	-	-
6 th	41.5	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/min
Rated hydraulic flow	73 l/min
Nº of supports in phenolic resin	4

STEERING

Type	Hydrostatic
Steering angle	42°
Steering wheel turns (lock to lock)	4.75
Pump capacity at 2,200 rpm	41.8 l/min
Pressure release valve	151 bar
Integrated with the priority steering valve	
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	153.3 kg/m 172.8 kg/m
Rear section	
Size	121 x 299 mm
Weight	78.3 kg/m 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.	186 L/min at 2,200 rpm
Rated flow	9 sections
Control valve	8
Quick couplers for diagnostics	

ELECTRICAL SYSTEM

Power	24 V
Alternator	80 A
Batteries	2x100 Ah – low maintenance
Lights	
Front headlights 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
Monitoring of electronic systems	

REFILL CAPACITIES

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

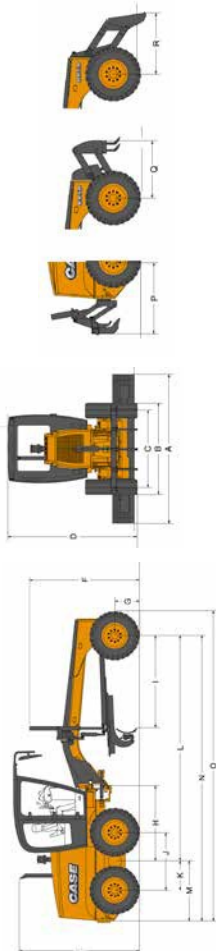
BLADE

Form	845B VHP	865B VHP
Width	3,658 mm	Involute curve
Height (curved profile)	622 mm	3,962 mm
Thickness		671 mm
Cutting edge		22 mm
2, interchangeable		
Blade side shift		
Left		686 mm
Right		533 mm
Maximum bank-cutting angle (left and right)		90°
Ground penetration (max.)		711.2 mm
Lift above ground (max.)		444.3 mm
Blade side shift and pitch		Hydraulic type

OPERATING WEIGHT

With standard blade, operator weight 75 kg, full tank, fully service and standard equipment.			
Front axle	kg	4,496	4,600
Rear axle	kg	10,109	10,730
Machine	kg	14,605	15,330
Blade load	kg	7,645	8,341

GENERAL DIMENSIONS



A	Blade width	mm	3,658	845B VHP	865B VHP
B	Tread width	mm	2,499	3,962	2,462
C	Tread gauge	mm	2,106	2,106	2,106
D	Height to top of cab	mm			
	High-profile cab	mm	3,340	3,340	3,340
	Low-profile cab	mm	3,140	3,140	3,140
E	Height of top of exhaust	mm	3,323	3,323	3,323
F	Height to top of blade lift cylinder	mm	3,047	3,047	3,047
G	Tire static radius	mm	610	610	610
H	Distance between tandem center and the frame articulation pin	mm	1,958	1,958	1,958
I	Distance between the front axle and the blade	mm	2,562	2,562	2,562
J	Distance between the center of the rear tires	mm	1,572	1,572	1,572
K	Distance between tandem center and the wheel	mm	786	786	786
L	Wheelbase	mm	6,219	6,219	6,219
M	Distance between tandem center and the rear part of the equipment	mm	1,650	1,650	1,650
N	Distance between the front wheel axle and the rear part of the equipment	mm	7,869	7,869	7,869
O	Overall length	mm	8,534	8,534	8,534
P	Distance between the rear tires and the ripper	mm	2,028	2,028	2,028
Q	Distance between the front tires and the ripper	mm	1,520	1,520	1,520
R	Distance between the front tires and the dozer blade	mm	1,626	1,626	1,626
	Turning radius (outside the tires)	mm	7,250	7,250	7,250
	Ground clearance – rear axle	mm	380	380	380
	Ground clearance – front axle	mm	580	580	622

All units fitted with 14.0 x 24-12L tires, open ROPS/FOPS cab, standard battery, full fuel tank, 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

TIRES

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

OTHERS

- Drawbar / Standard circle

AXLES

845B VHP

- "Limited Slip" torque differential (anti-skid system)

865B VHP

- "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
- Fuel consumption Engine
- 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 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

CAB

- Closed high cab (fixed front window)
- Closed high cab (front flip-down window)
- Closed low cab (fixed front window)
- Closed low cab (front flip-down window)

OTHERS

- Ventilation box for closed cab
- Heater for closed cab
- Air conditioner for closed cab
- Acoustic insulation 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

- Dozer Blade
- Push plate
- 5 tooth front scarifier
- 6 additional teeth for the front scarifier
- Dozer blade float electrovalve
- Front counter weight

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
- Heavy Duty cutting edge - extra

REAR ATTACHMENT

- Ripper with 5 teeth for 845B VHP
- Ripper 3 teeth and Scarifier 5 teeth for models 845B VHP and 856B VHP
- Additional teeth (2 for ripper + 4 scarifier)
- 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

LOCK/FLOATING/ANTI-SHOCK - MOLDBOARD AND CIRCLE

- Moldboard lifting cylinder lock valve
- Moldboard float electrovalve (includes the lock valve)
- Anti-shock electrovalve with 2 accumulators for the moldboard
- Anti-shock electrovalve with 3 accumulators for the moldboard and circle

SEAT / SEATBELT

- Extra quality vinyl mechanical suspension seat
- Mechanical suspension fabric seat
- Pneumatic mechanical suspension fabric seat 3"
- 76.5 mm seatbelt

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

- 10" Rim - 3 piece / 14x24 tire - 12L - G2
- 13" Rim - single piece / 17.5x25 tire - 12L - L2
- 14" Rim - 3 piece / 17.5x25 tire - 12L - L2
- 14" Rim - 3 piece / 17.5x25 tire - 16L - L3

Tires with tubes

- 9" Rim - single piece / 14x24 tire - 12L - G2
- 10" Rim - 3 piece / 14x24 tire - 12L - G2

Radial tubeless tires

- 9" Rim - single piece / 14x24 tire - 12L - L2
- XGLA2 RADIAL
- 10" Rim - 3 piece / 14x24 tire - 12L - L2
- XGLA2 RADIAL

RIMS

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

SCARIFIER

- Type: Front mounted
- Cutting width: 1.168 mm
- Teeth: 5 (optionally, 11)
- Spacing between teeth: 229 mm (114 mm, optional)

- Lift above ground: 527 mm
- Maximum Penetration: 318 mm
- Weight: 570 kg

REAR RIPPER - 845B 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

845B VHP - 865B VHP

- Type: Parallelogram
- Cutting width: 2.185 mm
- Teeth base: ripper 3 + scarifier 5
- Teeth additional: ripper 2 + scarifier 4
- 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: 1.165 kg

Standard and optional equipment shown can vary by country.

CASE NEW HOLLAND CONSTRUCTION EQUIPMENT (INDIA) PRIVATE LIMITED

B1-207, 2nd Floor, Boomerang, Chandivali Farm Road
Near Chandivali Studio, Andheri (East)
Mumbai - 400072, Maharashtra, India
Email: caseindia@cnhind.com

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