

ENGINE - VHP

Model	FPT F4HE9687B, Tier 3 certified
	Compliant w/ EPA regulations effective January 2011
	Electronic control
Type	4-stroke, turbocharged and air to air after cooled
Cylinders	6, in-line
Bore/Stroke	4.09 in x 5.17 in (104 mm x 132 mm)
Displacement	409 in ³ (6.7 L)
Fuel injection	Common rail
Fuel	Diesel
Cooling	Liquid
Horsepower @ 2200 RPM – SAE J1995:	
Gross	150/173 hp (112/129 kW)
Net	140/160 hp (104/119 kW)
Maximum torque @ 1500 RPM:	
	486/560 ft-lb (659/758 N-m)

DRIVETRAIN

Rear axle	Graziano, planetary
Differential	Hydraulic lock, operator controlled
Outboard brakes	Wet disc
Number of discs/brake	5
Brake surface area	2,220 in ² (14 326 cm ²)
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	14.0 x 24 12PR TL G2 Firestone
Rims	1-piece 9 in x 24 in (227 mm x 610 mm)
Transmission type:	
	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
Diagnostics	On-board

DRIVETRAIN (cont.)

Speeds:	
Forward:	mph (km/h)
1st	2.6 (4.2)
2nd	3.6 (5.8)
3rd	5.2 (8.3)
4th	7.1 (11.5)
5th	10.2 (16.4)
6th	14.1 (22.7)
7th	19.8 (31.9)
8th	27.3 (43.9)
Reverse:	mph (km/h)
1st	2.3 (3.7)
2nd	4.6 (7.4)
3rd	9.1 (14.7)
4th	18.1 (29.2)

ELECTRICAL

Voltage	24 Volts, negative ground
Alternator	90 amp
Batteries	(2) Low-maintenance 1010 CCA – 100 Ah (20 hr rate)
Work lights:	
	Headlights (2); Turn signals, front/rear; Stop/tail (2); Rear mounted floods (2); Front mounted floods (2).
Backup alarm	Standard

OPERATOR ENVIRONMENT

ROPS/FOPS cab – SAE J231, ISO 3449;
Adjustable operator's console; Adjustable cloth
suspension seat w/ 3 in (76 mm) retractable
seat belt; Safety glass, Dome light; Inside
rearview mirror; Outside rearview 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 wiper – front; Windshield
washer – front.

OPERATING WEIGHT

W/ 12 ft (3.65 m) moldboard, 14.00 x 24 tires, 175 lb (79 kg) operator, and full fuel:	31,812 lb (14 430 kg)
Weight, front axle	9,105 lb (4130 kg)
Weight, rear axle	22,707 lb (10 300 kg)
Blade pressure	16,854 lb (7 645 kg)

HYDRAULICS

System design	Closed center load sensing
Hydraulic pump	Load sensing piston pump, variable displacement, pressure and flow compensated
Rated flow @ 2200 RPM	49 gpm (187 L/min)
Control valve	9 section
Side shift and pitch	Hydraulic
Saddle	5 positions
Diagnostic quick couplers	8

SERVICE CAPACITIES

Engine	4.4 gal (17.5 L)
w/ filter change	4.7 gal (18.5 L)
Fuel	90 gal (341 L)
Transmission	4.8 gal (18 L)
w/ filter change	5.5 gal (21 L)
Radiator	10.5 gal (40 L)
Hydraulic reservoir	24 gal (91 L)
Hydraulic system	47.5 gal (180 L)
Circle gearbox	3 qt (2.8 L)
Rear axle center	10.5 gal (40 L)
Total axle	10.5 gal (40 L)
Tandem case, each	15.9 gal (60 L)

OTHER SPECIFICATIONS

Steering:

Type	Hydrostatic power steering
Turns – lock-to-lock	4.75
Pump capacity @ 2200 engine RPM:	
	11.1 gpm (41.8 L/min)
Relief pressure	2200 psi (151 bar) Integral w/ 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
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Articulation:

Type	Hydraulic actuated – w/ lock valve
Range	25° left/right
Controls	Hydraulic

MAINFRAME

Type	All welded box
Front section:	
Size	10.0 in x 11.73 in (254 mm x 298 mm)
Weight – each side	103.1 lb-ft (153.3 kg/m)
Rear section:	
Size	4.75 in x 11.75 in (121 mm x 299 mm)
Weight – each side	52.7 lb-ft (78.3 kg/m)

DRAWBAR

Type:	“A” frame welded construction with center mounted circle turn motor
Ball and circle	Shim adjustable

MOLDBOARD

Type	High-carbon steel
Shape	Involute curve
Length	12 ft 0 in (3 658 mm)
Height	22 in (559 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	90°
Left	90°
Max. ground penetration	28 in (711.2 mm)
Max. lift above ground	17.5 in (444.5 mm)

CIRCLE

Type	Welded construction
Diameter:	
Max. outside	69.0 in (1 752.6 mm)
Vertical member	63.0 in (1 600.2 mm)
Rotation	360°
Speed	1.2 RPM (7.2°/second)
Drive	Hydraulic motor
Type	Roller geroter
Displacement	15.26 in ³ /Rev. (0.25 L/Rev.)
Rated hydraulic flow	19.8 gpm (75 L/min)

ATTACHMENTS

SCARIFIER

Type	Front mounted
Width of cut	46 in (1 168 mm)
Teeth	5
Optional	11
Tooth spacing	9.0 in (229 mm)
Optional	4.5 in (114 mm)
Lift above ground	20.75 in (527 mm)
Max. penetration	12.5 in (318 mm)
Weight	1,256 lb (570 kg)
	Includes front attachment group

PUSH BLOCK

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

REAR RIPPER

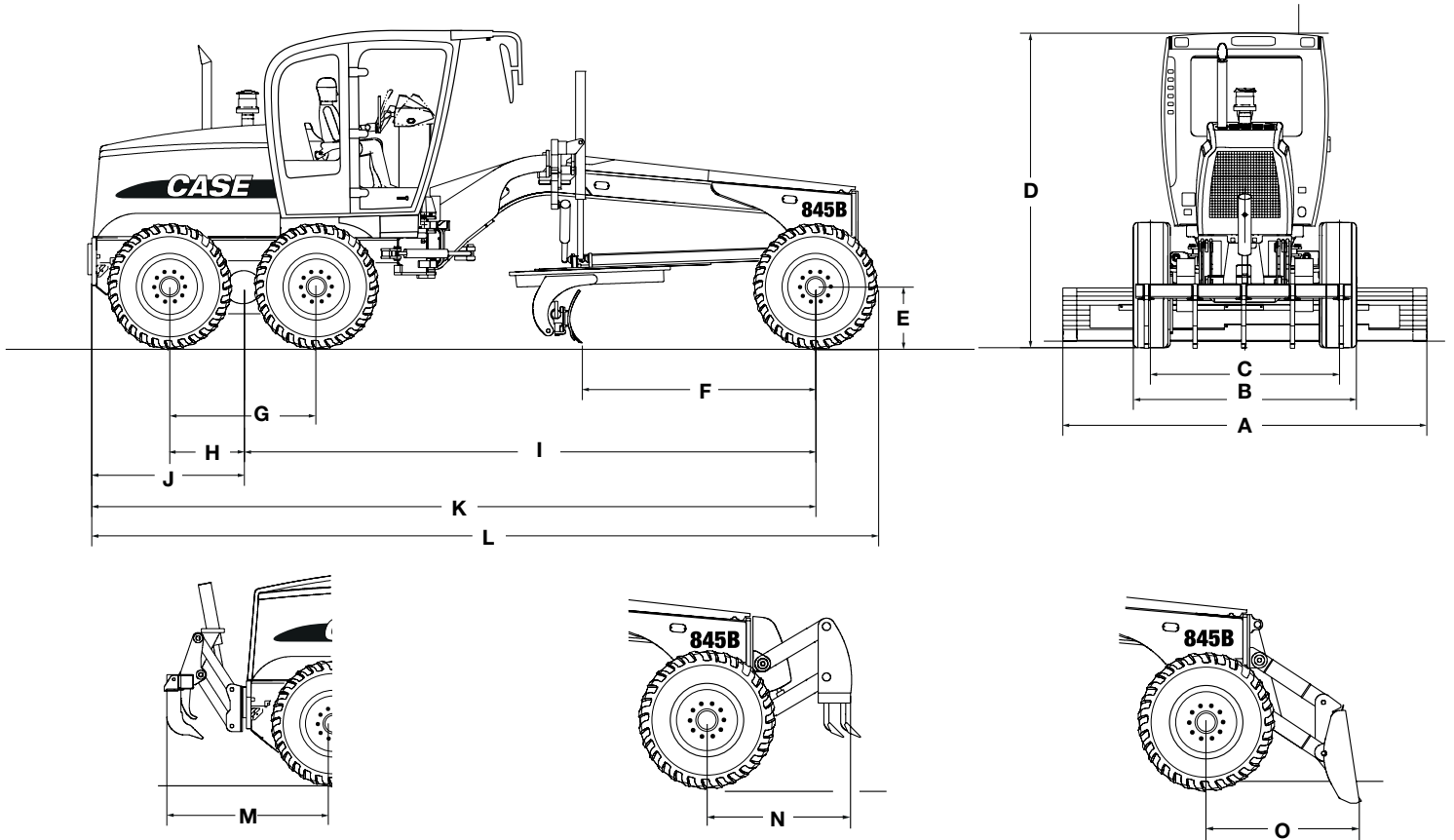
Type	Parallel
Ripper teeth	3
Optional	5
Width of cut	86.0 in (2 185 mm)
Lift above ground:	
Ripper teeth	20.38 in (518 mm)
Max. penetration:	
Ripper teeth	13.78 in (437 mm)
Weight	1,375 lb (625 kg)

DOZER BLADE

Type	Front mounted
Width	109 in (2 762 mm)
Height	37.5 in (953 mm)
Lift above ground	24.5 in (622 mm)
Penetration	6.5 in (165 mm)
Weight	2,568 lb (1 165 kg)
	Includes front 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

	845B DHP
A. Blade width	12 ft 0 in (3 658 mm)
B. Distance between outside edges of tires	8 ft 2 in (2 499 mm)
C. Wheel tread	6 ft 11 in (2 106 mm)
D. Height to top of cab – high profile	10 ft 11 in (3 340 mm)
D. Height to top of cab – low profile	10 ft 4 in (3 140 mm)
E. Tire radius – when static	2 ft 0 in (610 mm)
F. Blade base	8 ft 5 in (2 562 mm)
G. Distance between tandem axles	5 ft 2 in (1 572 mm)
H. Distance between tandem center and wheel	2 ft 7 in (786 mm)
I. Wheelbase	20 ft 5 in (6 219 mm)
J. Distance between tandem center and rear end of machine	5 ft 5 in (1 650 mm)
K. Distance between front axle and rear end of machine	25 ft 10 in (7 869 mm)
L. Overall length – without ripper or front attachment	28 ft 0 in (8 534 mm)
M. Distance between rear tires and rear ripper	6 ft 8 in (2 028 mm)
N. Distance between front tires and front scarifier	5 ft 0 in (1 520 mm)
O. Distance between front tires and front dozer blade	5 ft 4 in (1 626 mm)
Outside tire turning radius	23 ft 9 in (7 250 mm)
Ground clearance – rear axle	14.9 in (380 mm)
Ground clearance – front axle	24.5 in (622 mm)

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

STANDARD EQUIPMENT

OPERATOR ENVIRONMENT

See page 1

ENGINE

FPT F4HE9687B 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

DRIVETRAIN

Hydraulic differential lock

HYDRAULICS

Closed center, load sensing hydraulic system
Controls for all functions
9 section control valve
Hydraulic moldboard side shift and pitch
5-position saddle
12 ft x 22 in (3658 x 559 mm) moldboard
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.
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

(2) Heavy-duty batteries – 1010 CCA
Electronic Systems Monitor
Horn
Alternator – 90 amp
Backup alarm
Headlights
(2) Turn signals front
(2) Tail lights with turn signals, brake lights
Flood lights – cab mounted

TELEMATICS

CASE SiteWatch™ Telematics – includes
hardware and a 3-yr Advanced
data subscription

OPTIONAL EQUIPMENT

MOLDBOARDS

13 ft x 23.6 in (3962 x 600 mm), involute curve
14 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 ENVIRONMENT

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

(2) Front mounted working lights
(2) Floodlights at moldboard
(2) Floodlights at articulation
Snow wing lighting package

DRIVETRAIN

Limited slip differential

OTHER

Bidirectional engine cooling fan
Cold weather package
Fire extinguisher
Strobe light
Tool box – without tools
Deluxe tool box – with tools
Tire inflator kit
Spare wheel
Spare wheel support
Slow moving vehicle sign
Rear pull hook

ATTACHMENTS

Front pull hook
Front counterweight
Front dozer blade
Front scarifier
Front push plate
Front support and lift cylinder
Rear ripper



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.

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