

GRADER

ENGINE

Brand	CASE/FPT
Model	F4HE9687W*J106
Type	Electronic, diesel, 4-stroke, direct injection, turbocharged, Tier 3 certified
Cylinders	6
Bore and stroke	4.09 x 5.19 in (104 x 132 mm)
Cylinder volume	408.86 in ³ (6,7 l)
Power @ 2200 rpm	
Gross (SAE J1995)	150/173 hp (112/129 kW)
Net (SAE J1349)	140/160 hp (104/119 kW)
Maximum torque @ 1500 rpm	
Gross (SAE J1995)	486/559 lbf.ft (659/758 Nm)
Net (SAE J1349)	436/500 lbf.ft (591/678 Nm)

POWER TRAIN

Rear Axle	
Ground clearance	1 ft 3 in (380 mm)
Differential	Proportional torque
*Brakes	Disk, in oil bath
Number of disks per brake	5
Tandem	
Type	Welded plate
7' 2,7" x 2' 0,8" x 8" (2204 x 631 x 201 mm)	
Oscillation	20° in each direction
Command chain pitch	2 in (50,8 mm)
Thickness of internal and external side wall	0.75 in (19 mm)
Front axle	
Type	Welded high resistance steel
Oscillation	15° in each direction
Wheel lean	20° in each direction
Clearance	Ground 1 ft 11 in (580 mm)
Tyres	14 x 24 12L- G2 sem câmara
Rims	9" (peça única)

*SAE J150 3450 (brake performance)

ELECTRICAL SYSTEM

Voltage	24 V (with grounding)
Alternator	90 A
Batteries	2x100 Ah – low maintenance
Lights	
Front headlight with turn signals (2)	
Brake light and rear turn signals (2)	
Rear cab mounted work light (2)	
Front cab mounted work light (2)	
Monitoring of electronic systems	

HYDRAULIC SYSTEM

Type	Closed centre, load-sensing
Hydraulic pump	Axial piston pump, variable flow, equipped with load sensing system
Nominal Flow @ 2200 rpm	49 gpm (186 l/min)
Control valve	9 sections
Diagnostic couplers	8

TRANSMISSION

Brand	ZF	
Model	ZF TC LOCK UP 6WG – 160	
Type	Torque converter with lock up (also functioning as Direct Drive) Powershift, electronic gear shift control, automatic, no inching pedal for progressive advance	
Rated flow @ 2.000 rpm	22.4 gpm (85 l/min)	
Crankcase	Integral	
Drive gears	6 forward / 3 reverse	
Travel control	Electronic control, single “pulsing” lever and automatic module	
Fault diagnostics system	On-board	
Speeds – mph (km/h)		
	Forward	Reverse
1st	3.1 (5,0)	3.3 (5,3)
2nd	4.8 (7,7)	7.8 (12,5)
3rd	7.3 (11,8)	17.8 (28,6)
4th	11.3 (18,2)	-
5th	16.9 (27,2)	-
6th	25.8 (41,5)	-

STEERING

Type	Hydrostatic steering
Angle - right and left	42°
Steering wheel turns (lock-to-lock)	4,5
Pump capacity @ 2200 rpm	11 gpm (42 l/min)
Pressure relief	2530 psi (17,5 MPa) built into the steering priority valve
Cylinders	2
Diameter	2 in (50,8 mm)
Stroke	11.8 in (301 mm)
Rod diameter	1 in (25,4 mm)
Supplemental steering	Built-in
SAE J53 e J1511	

ARTICULATION

Type	Hydraulically driven (with lock out system)
Range	25° left/right
Controls	Hydraulic

DRAWBAR

Type	"A" frame welded construction with centre mounted circle turn motor
Connection with the chassis	Shim adjustable ball stud

CIRCLE

Type	Welded construction
Maximum outside diameter	5 ft 9 in (1752,6 mm)
Rotation	360°
Speed	1,2 rpm (7,2°/segundo)
Power drive	Hydraulic motor
Type	Gearmotor
Displacement	15.25 in ³ /rev (0.25 l/rev)
Nominal hydraulic flow	25 gpm (94.6 l/min)
Implement and with rear <i>ripper</i> plates	4

CAPACITIES

Engine	4 gal (15 l)
With filter change	4.2 gal (16 l)
Fuel	90 gal (341 l)
Transmission	6.6 gal (25 l)
With filter change	6.9 gal (26 l)
Engine water cooling system	8.5 gal (32 l)
Hydraulic oil reservoir	23.8 gal (90 l)
Total hydraulic system	39,10 gal (148 l)
Circle gearbox	2.95 qt (2,8 l)
Tandem case (each)	18.2 gal (69 l)

MISCELLANEOUS

Front counterweight	Without any front implement and with rear <i>ripper</i>
Saddle	5 positions

MOLDBOARD

Type	High-carbon steel
Shape	Involute curve
Width	12 ft 0.5 in (622 mm)
Height (curved profile)	2 ft 0.5 in (622 mm)
Thickness	0.86 in (22 mm)
Cutting edge	2, interchangeable
Blade pitch positions	
Normal pitch	47°
Minimum pitch	42°
Maximum pitch	87°
Blade shift Front section	
Right	2 ft 3 in (686 mm)
Left	1 ft 9 in (533 mm)
Maximum bank cutting angle	
Rear (left and right)	90°
Ground penetration (max.)	2 ft 4 in (711.2 mm)
Lift above ground (max.)	1 ft 5.5 in (444.5 mm)
Blade side shift and pitch	Hydraulic type

SCARIFIER

Type	Front mounted
Width of cut	3 ft 10in (1168 mm)
Teeth	5 (optional, 11)
Spacing between the teeth	9 in (229 mm) 4.5 in (114 mm, optional)
Lift above ground	1 ft 8 in (527 mm)
Maximum penetration	1 ft 0.5 in (318 mm)
Weight	1256 lb (570 kg)

OPERATING WEIGHT

With a blade of 12' (3658 mm), full tank, cab, headlights, STD batteries, 14x24 tire - 12L - G2, light *ripper* and front counterweight.

	33223 lb (15070 kg)
Weight, front axle	8891 lb (4033 kg)
Weight, rear axle	24332 lb (11037 kg)
Blade pull force	21898 lb (9933 kg)
Blade penetration force	15540 lb (7049 kg)
<i>Ripper</i> penetration force	17295 lb (7845 kg)

CHASSIS

Type	Full welded box
Front section	
Size	10 x 11.7 in (254 x 298 mm)
Weight	338 lb/ft (153.3 kg/m)
Rear section	
Size	4.7 x 11.7 in (121 x 299 mm)
Weight	172.6 lb/ft (72.3 kg/m)

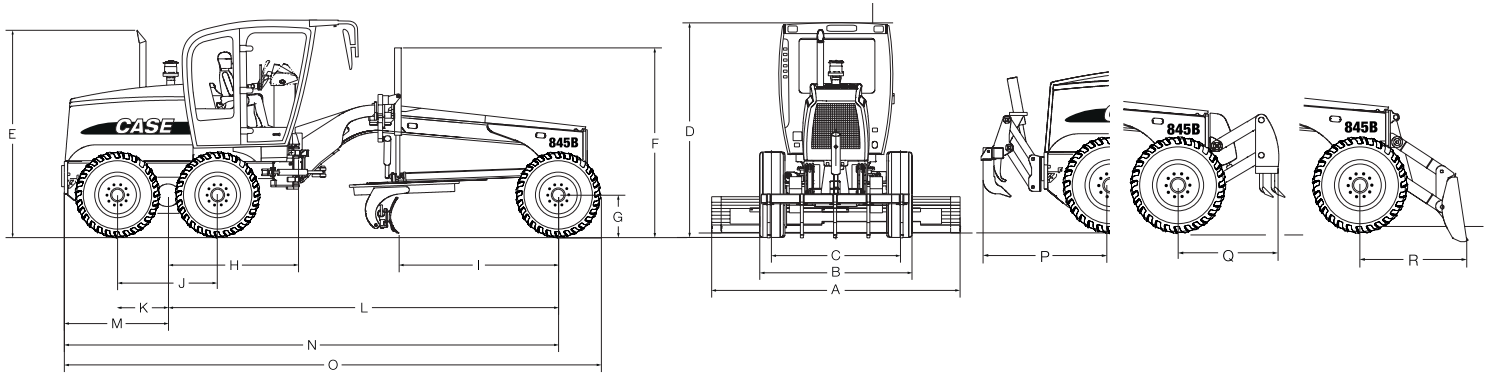
REAR RIPPER

Type	Parallelogram
Cutting width	7 ft 1 in (2165 mm)
Teeth	
Lightweight <i>ripper</i>	5
Small	<i>Ripper</i>
Medium	3 large + 5 small
Lift above ground	
Lightweight <i>ripper</i>	2 ft 4 in (703 mm)
Medium <i>ripper</i>	
Large teeth	1 ft 8 in (518 mm)
Small teeth	2 ft 4 in (703 mm)
Maximum penetration	
Lightweight <i>ripper</i>	1 ft (306 mm)
Medium <i>ripper</i>	
Large teeth	1 ft 5 in (437 mm)
Small teeth	9.9 in (252 mm)
Weight	
Lightweight <i>ripper</i>	1433 lb (650 kg)
Medium <i>ripper</i>	1797 lb (815 kg)

FRONT BLADE

Type	Front mounted	Width
Width	9 ft 0.7 in (2762 mm)	
Height	3 ft 1.5 in (953 mm)	
Lift above ground	2 ft 0.4 in (622 mm)	
Penetration	6.5 in (165 mm)	
Weight	2568 lb (1165 kg)	

DIMENSIONS



A – Blade width	12' (3658 mm)
B – Distance between wheels measured at outside of tires (Total width for transport)	8' 2" (2.495 mm)
C – Distance between the wheels	6' 9" (2.074 mm)
D – Height to top of cab	
High profile cab	11' 2" (3400 mm)
Low profile cab	10' 6" (3200 mm)
E – Height to top of engine exhaust pipe	10' 11" (3323 mm)
F – Height to top of the blade lift cylinder	10' (3047 mm)
G – Static tire radius	2' (610 mm)
H – Distance from centre of tandem to chassis pivot pin	6' 5" (1958 mm)
I – Distance between front axle and blade	8' 5" (2562 mm)
J – Distance between centre of rear tires	5' 2" (1572 mm)
K – Distance between centre of tandem and wheel	2' 7" (786 mm)
L – Wheelbase	20' 5" (6219 mm)
M – Distance between centre of tandem and rear section of the equipment	5' 5" (1650 mm)
N – Distance between the front wheel axle and the rear of the equipment	25' 10" (7868 mm)
O – Total length	28' (8534 mm)
P – Distance between rear tires and <i>ripper</i>	6' 9" (2028 mm)
Q – Distance between front tires and <i>ripper</i>	5' (1520 mm)
R – Distance between front tires and front blade	5' 4" (1626 mm)
Turning radius (outside the tires)	23' 9" (7250 mm)

All units equipped with 14.0 x 24-12L tires, ROPS/FOPS closed cab, standard battery, full fuel tank, operator weighing 165 lb (75 kg),, specifications per ISO 7134.

STANDARD EQUIPMENT

Operator cab

ROPS/FOPS high closed cab
(fixed front window) with:
Air conditioning (*)
Adjustable cloth mechanical suspension
seat with 2 in (50.8 mm) seat belt
Adjustable operator console
Pedal accelerator
Manual accelerator
Front upper windshield wiper with washer
Safety glass
Dome light
Internal and external rearview mirrors
12 V socket (*)
Automatic master switch
Steps on the right-hand and left-hand sides
(*) Only available in closed cabs

All ROPS/FOPS cabs are certified according
to standards SAE J1040 (ROPS) and
SAE J231(FOPS).

Engine

Case/FPT 6.7 L turbocharged, diesel
Tier 3 certified
Electronic fuel injection
Dry air filter with primary and secondary
safety elements
Air pre-filter with cyclonic dust ejector
90 A alternator
5.4 hp (4.0 kW) starter motor
Swing-up hood

Hydraulic system

Closed centre, load-sensing hydraulic system
9-section control valve
Hydraulic control for all functions:
blade lifting (right and left side), circle turn,
circle side shift, wheel lean, chassis
articulation, blade side shift and pitch,
front and rear accessories.
Diagnostic centre with 8 quick couplers
Movable saddle with 5 service positions and
electro-hydraulic lock
Blade 12' x 2' x 0.86" (3658 x 622 x 22 mm)
Hydraulic axial piston pump
Hydraulic motor fan

Brakes

Multi-disk oil-bathed service brakes with nitrogen
accumulator safety system.
Transmission-integrated disk parking brakes,
with warning light.

Tyres

9" one-piece rim/14 x 24 - 12L - G2
Tubeless

Other

Standard tool set
Drawbar/ Standard circle

Axles

"Limited Slip" proportional torque differential
(anti-slip system)

Steering

Hydrostatic steering with built-in
emergency system

Instruments

Electronic Information centre
Indicators/gauges:
Speedometer
Tachometer
F/N/R direction selected
Transmission modes – automatic/manual
Selected Gear
Engine coolant temperature
Fuel level
Transmission oil temperature
Hydraulic oil temperature
Hour meter
Fuel consumption
Engine diagnostics
DeClutch activation indicator
Transmission diagnostics

Indicator lights

Low fuel level
Flood lights
High Beam
Brake pressure
Main alert
Parking brake

Audible alerts

Caution alert
Emergency alert
Reverse alarm

Electrical system

Lights
Front headlight with turn signal (2)
Brake light and rear turn signals (2)
Rear cab mounted work light (2)
Front cab mounted work light (2)
24 V system (2 12 V / 1010 CCA batteries)
Electronic systems monitoring
Hooter
Hour meter
Reverse alarm

Transmission

ZF Transmission, torque converter type with
lock up (also functions as Direct Drive),
Powershift, 6 forward and 3 reverse speeds,
automatic gear shifting, emergency device in
case of electrical failure (Limp-Home).

Rear implement

Lightweight ripper with 5 small teeth
1433 lb (650 kg)

Front implement

Front counterweight 1085 lb (492 kg)

OPTIONAL EQUIPMENT

Cab (ROPS/FOPS)

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

Other

Heater and fan for closed cab
Acoustic insulation for closed cab
Fire extinguisher
Windshield washer and lower windshield wipers
Rear windshield washer and wipers
Radio
Tandem locking device
Sun visor (front and rear)
Rear defroster

Front implement

Dozer blade	2568 lb (1165 kg)
Light push plate	1085 lb (492 kg)
Heavy push plate	1764 lb (800 kg)
Front scarifier with 5 teeth 6 additional teeth for front scarifier	1521 lb (690 kg)
Dozer blade float electrovalve	

Rear implement

Medium *ripper* with 3 large teeth and 5 small
1796 lb (815 kg)
Rear pull hook
Machine lifting bracket

Blade

Blade	13' x 2' x 0.86" (3962 x 671 x 22 mm)
Blade	14' x 2' x 0.86" (4267 x 671 x 22mm)
Right blade extension	2' (610 mm)
Left blade extension	2' (610 mm)
Heavy Duty cutting edge	Additional

Work lights

2 work lights behind the blade
2 service lights in front of the mouldboard
2 rear implement work lights

Lock/Floating/Anti-shock – Mouldboard and circle

Mouldboard lifting cylinder lock valve
Mouldboard float electrovalve
(incorporates lock valve)
Anti-shock electrovalve
with 2 accumulators for mouldboard
Anti-shock electrovalve
with 3 accumulators for mouldboard and circle

Seat/Safety belt

Vinyl seat with mechanical suspension
Cloth seat with air suspension
Seat belt 76.5 mm (3")

Other optional items

Beacon light
Luxury tool box
Toolbox without tools with support,
fixed on front chassis
Slow moving vehicle sign
Electric pump to inflate tires
Spare tire cradle
Axle
Convenciona differential with four-wheel braking
and differential lock with electro-hydraulic
power drive (rear axle).

Tires and mounted rims

Tubeless tires
10" rim – 3-piece / 14x24 tire – 12L – G2
13" rim – one-piece / 17.5x25 tire – 12L – L2
14" rim – 3-piece / 17.5x25 tire – 12L – L2
14" rim – 3-piece / 17.5x25 tire – 16L – L3

Tube tires

9" rim – one-piece / 14x24 tire – 12L – G2
10" rim – 3-piece / 14x24 tire – 12L – G2

Tubeless radial tires

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

Rims

9" rim – one-piece with valve
13" rim – one-piece with valve
10" rim – 3-piece with valve
14" rim – 3-piece with valve



Fleet monitoring and tracking management system through satellite or mobile phone

Case reserves the right to implement improvements in the project and alterations to the specifications at any time, without prior notice, and not being liable to install them in previously sold units. The specifications, descriptions and graphics correctly reflect the information known to this day in this publication. This information may vary in different regions and may be subject to changes without previous notice. The graphics may include equipment and optional accessories, and may not include all the standard units.

CASE Construction equipments and CASE/FPT engines are manufactured by the same company: CNH Industrial

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