CASE CONSTRUCTION

# B-SERIES 2
# MOTOR GRADERS


865B | 885B

# B-SERIES 2
## MOTOR GRADERS

**1842** CASE is founded.
**1869** The first CASE portable steam engine – road construction is born!
**1957** The first factory-integrated loader/backhoe in the world: a CASE industry first.
**1958** The first CASE 4-WD wheel loader, the W9, is introduced.
**1967** CASE enters excavator market.
**1998** Ride control on loader backhoes and skid steer loaders: another CASE first.

# HERITAGE
## A TRADITION OF INDUSTRY FIRSTS

**2011** All around visibility cab introduction on 800 series and FPT TIER III Engine installation (“B series”)

**2012** Torque converter introduction on flagship model 885B

**2015** CASE graders enter the European market with the new T4 final /EU Stage IV models.

**2022** Machine productvity and reliability improve with the introduction of the new CASE Graders B series 2

**2022** C Series is launched with the T4 engine

# MAIN REASONS
## TO CHOOSE THE B-SERIES 2

### TORQUE CONVERTER LOCK-UP
The CASE transmission combines the torque converter's typical smoothness, for fine grading, with the direct drive solution for full power transfer.

### LOAD-SENSING HYDRAULIC SYSTEM
Balanced flow for all applications and for simultaneous moldboard movements.


### «A-SHAPE» FRAME
Optimised effort distribution in all conditions ensures a long operating life.

### MULTI-RADIUS BLADE
Lower power absorption and optimised rolling effect.

## REAR MOUNTED CAB

Best-in-class controllability and comfort: the operator is always in line with the working direction.

## EASY ACCESS

The easy serviceability is in the CASE: all the main checks can be easily performed from ground level; all the service points are grouped and positioned to facilitate servicing.

## VARIABLE POWER CURVE

The FPT Engine always delivers the power required for every task. On the 885B two power curves are available, while on the 865B three engine settings ensure even better performances.


## EXTERNALLY DRIVEN CIRCLE TEETH

The external pinion is not subject to shocks while working in heavy grading, while the slewing ring's external teeth prevent the accumulation of residual material, extending the overall working life.

## HIGH VERSATILITY

The wide variety of options enables every customer to tailor their grader to match the requirements of the most demanding applications.

# B-SERIES 2
# MOTOR GRADERS

## TORQUE CONVERTER LOCK-UP
**The machine drives faster with no extra torque**

The lock-up system overrides the torque converter operation in machines featuring the B-Series' type of engine and transmission coupling. When it is activated, the lock turns the hydraulic coupling into a direct (rigid) coupling. The Lock-up system is automatically activated according to operating conditions, when the transmission electronics unit's torque and engine speed readings reach preset values. The Lock-up is usually activated in travel applications where no extra torque is required from the torque converter and the machine runs at a higher speed.

## LOAD-SENSING HYDRAULIC SYSTEM
**Highly responsive & precise control**

The load-sensing hydraulic system helps maintain a balanced flow for all applications and for simultaneous moldboard movements. It ensures highly responsive and precise control, as well as easy and smooth operation. A directly activated axial piston pump only delivers the required amount of oil where it is needed, so that no power is wasted. The control valves ensure pressure compensation, enabling parallel lifting and lowering of the moldboard. A dedicated switch on the cab floor enables the operator to obtain maximum output from the hydraulic circuit independently from engine revolutions for faster reaction (Full Flow Mode).

# MOLDBOARD
# PRECISION TECHNOLOGY

## “A-SHAPE” FRAME
**Longer working life**

The durable front A-frame drawbar and high-strength circle provide outstanding stability. The A-frame drawbar features a heavy-duty boxed frame design that supports the circle with a wide stance, extending the life of the circle and drawbar components.

## MULTI RADIUS BLADE
**Productivity with less power**

The CASE radius design of the reinforced involuted moldboard consists of three different radiuses. This enables a more efficient and continuous cutting mixing and rolling, and extends the life of the blade. The efficient mixing effect on the spread-out material iimproves the consistency and longevity of the road surface.

## EXTERNALLY DRIVEN CIRCLE TEETH

**Insensitive to shocks**
CASE motor graders are designed with external circle teeth, which are easier to clean and provide a larger contact area. This prevents component wear and provides more leverage when turning the blade under load. As a result, there is no need for slip clutches or shear pins, which require repositioning or repairs.

# B-SERIES 2
## MOTOR GRADERS

# ATTACHMENTS
## THE ART OF VERSATILITY


FRONT COUNTERWEIGHT


FRONT PUSH PLATE


RIPPER


FRONT DOZER BLADE

## HIGH VERSATILITY

**CASE offers a variety of versatile grader attachments and accessories, including:**

- Front counterweight
- Ripper
- Scarifier
- Front push plate - light 492kg - heavy 800kg
- Front dozer blade
- Rear pull hook
- Additional lighting packages
- Lift cylinder accumulators
- Float control
- Moldboard extensions

# B-SERIES 2
# MOTOR GRADERS

## VARIABLE POWER CURVE
**for excellent performance**

From the unique moldboard design that rolls a superior mix and the fuel-efficient, turbocharged Tier 3 engine that delivers operating speeds of up to 38,8-44,1 km/h (depending on model), to the spacious rear-mounted cab that provides exceptional visibility on the machine's working components, the CASE B-Series 2 motor graders are designed for productivity. For an even greater performance, Dual Power maximises operation at higher speeds thants to the double (885B) or triple (865B) engine curve, which flattens from the 4th gear.

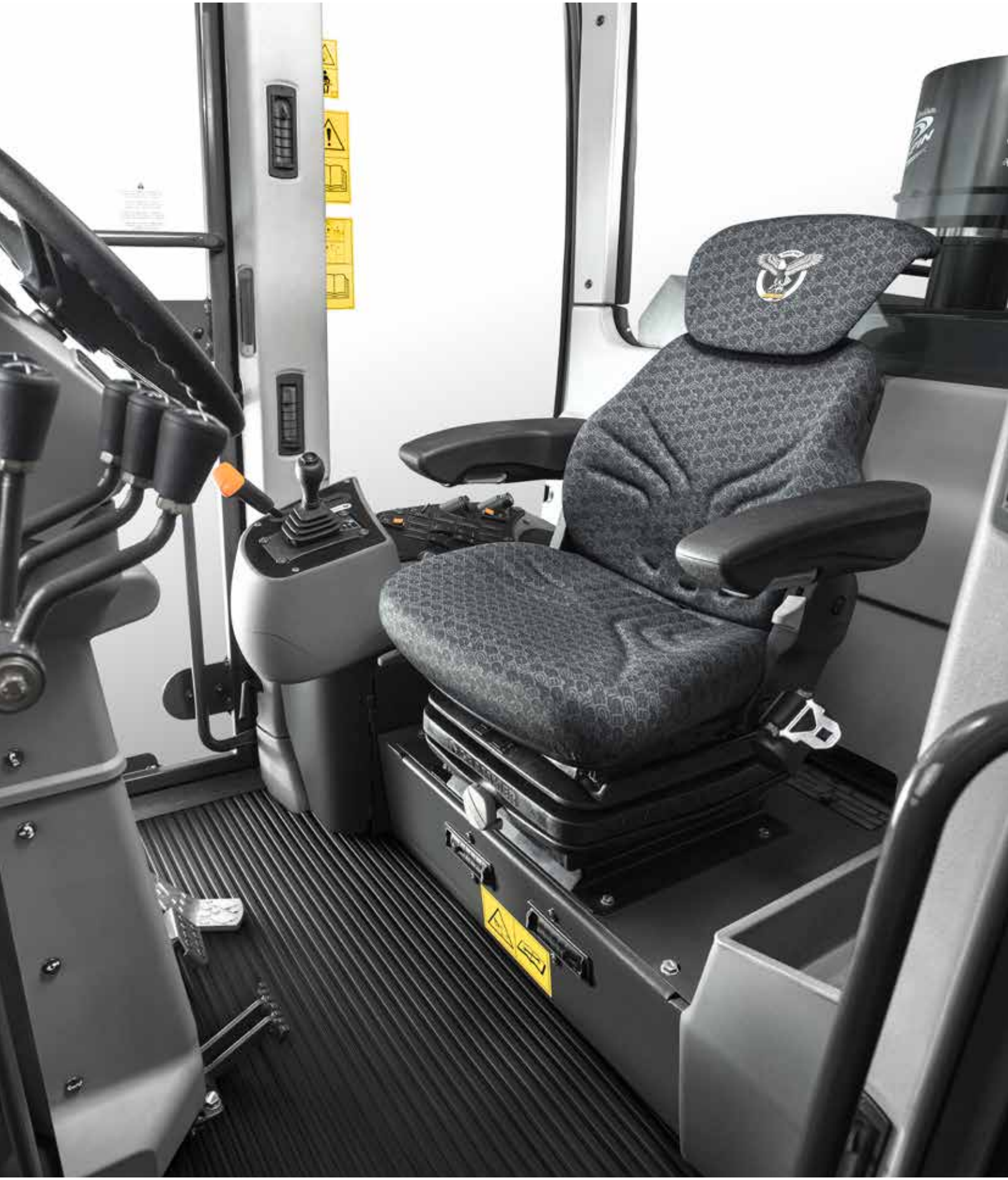
## EASY ACCESS
**Maintenance made easy**

When you invest in CASE equipment, you look for duration. We make it simple. CASE B Series 2 motor graders are no exception. From the one-piece, flip-up hood and reversible fan option that blows debris out of the cooler, to ground-level site gauges and service points, the machine is designed for easy daily maintenance. It's done in just a matter of minutes, so you can obtain the effective performance and long life you want from your machine.

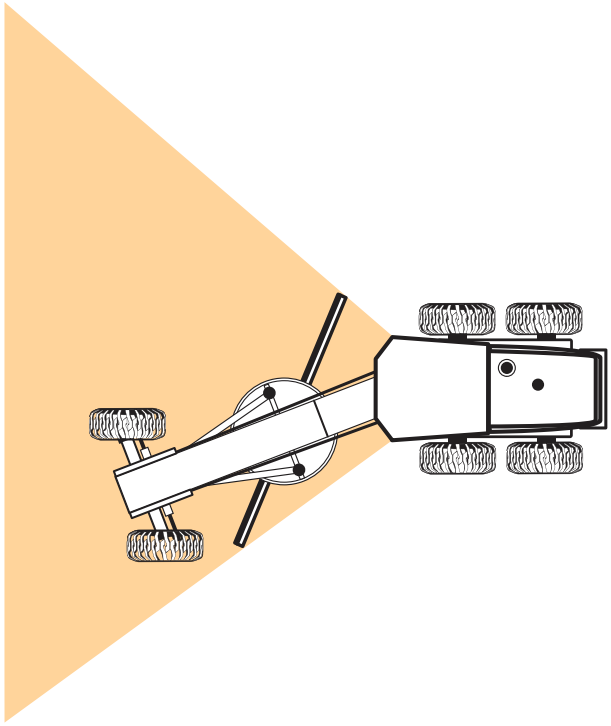
# MAINTENANCE


1. Engine air filter
2. Fuel tank refill
3. External circle teeth
4. Hydraulic test ports
5. Tandem oscillation grease zerks
6. Dual batteries
7. Hydraulic oil level gauge
8. Electric flip-up hood
9. Oil drain hose

# B-SERIES 2
## MOTOR GRADERS



# CAB
# COMFORT RULES



## REAR MOUNTED CAB
**Aligned with performance**

The CASE front articulation design, unique in the industry, allows for the cab to be mounted further back on the machine. With this design, the operator remains in a centred position while the gooseneck is articulated, increasing visibility on the moldboard, circle, saddle and tires.

The front articulation enables the operator to see both the rear and front half of the machine without having to look to the side when the machine is articulated. In addition, it allows for a tight turning radius, ideal for working in cul-de-sacs and tight spaces.

## MASSIVE CAB, MASSIVE COMFORT
**Stress free operation**

The Isomount cab reduces noise and vibration, and consequently operator fatigue. Couple that with a deluxe suspension seat with lumbar control and any operator will be not only comfortable, but more productive.

The sloping rear hood, breakaway heavy-duty side mirrors, and floor-to-ceiling glass with defrost rear window allow for outstanding visibility to the rear and to the front.

# B-SERIES 2
# MOTOR GRADERS

| ENGINE | | 865B | 885B |
|---|---|---|---|
| Brand | | FPT F4HE9687C | FPT F4HE9687K |
| Type | | Electronic common rail fuel system, water cooled, 4 cycle,direct injection, turbocharged and charge air cooled. | |
| Cylinders | | 6, in-line | |
| Bore/Stroke | mm | 104 x 132 | |
| Displacement | l ($cm^3$) | 6.7 (6728) | |
| **Horsepower @ 2200 rpm** | | | |
| **Gross (SAE J1995)** | | | |
| Low Curve* | kW | 144 | 164 |
| Imperial | hp | 193 | 220 |
| Metric | hp | 196 | 223 |
| Medium Curve*** | kW | 153 | - |
| Imperial | hp | 205 | - |
| Metric | hp | 208 | - |
| High Curve** | kW | 164 | 175 |
| Imperial | hp | 220 | 234 |
| Metric | hp | 223 | 238 |
| **Net (SAE J1349)** | | | |
| Low Curve* | kW | 133 | 153 |
| Imperial | hp | 178 | 205 |
| Metric | hp | 181 | 208 |
| Medium Curve*** | kW | 142 | - |
| Imperial | hp | 190 | - |
| Metric | hp | 193 | - |
| High Curve** | kW | 153 | 163 |
| Imperial | hp | 205 | 219 |
| Metric | hp | 208 | 222 |
| **Max Torque @1500/1600 rpm** | | | |
| **Gross (SAE J1995)** | | | |
| Low Curve * | Nm | 830 | 924 |
| Medium Curve*** | Nm | 880 | - |
| High Curve** | Nm | 930 | 984 |
| **Net (SAE J1349)** | | | |
| Low Curve | Nm | 380 | 864 |
| Medium Curve*** | Nm | 788 | - |
| High Curve | Nm | 930 | 924 |
| **POWERTRAIN** | | | |
| **Rear axle** | | | |
| Vertical ground clearance | mm | 380 | 359 |
| Differential | | Planetary with controlled differential hydraulic lock | Planetary with controlled differential hydraulic lock |
| Brakes | | Disk, bathed in oil | |
| Number of disks per brake | | 5 | 6 |
| **Tandem** | | | |
| Type | mm | Welded Plate (2204 x 631 x 200.5) | |
| Oscillation | | 20° in each direction | |
| Command chain pitch | mm | 50.8 | |
| Thickness of the internal and external side wall | mm | 19 | |
| **HYDRAULIC SYSTEM** | | | |
| Type | | Closed centre, load sensing | |
| Hydraulic pump | | Piston pump, variable displacement pressure and flow compensated, load sensing | |
| Rated flow | l/min(gpm) | 186 (49)@ 2200 rpm | |
| Pressure cut off | bar | 193 | |
| Control Valve | | 9 sections | |

Notes: *Gears $1^{st}$, $2^{nd}$ F e $1^{st}$,$2^{nd}$ R
** Gears $3^{rd}$, $4^{th}$, $5^{th}$, $6^{th}$ F e $3^{rd}$ R
*** Gears $3^{rd}$, $4^{th}$ F e $3^{rd}$ R

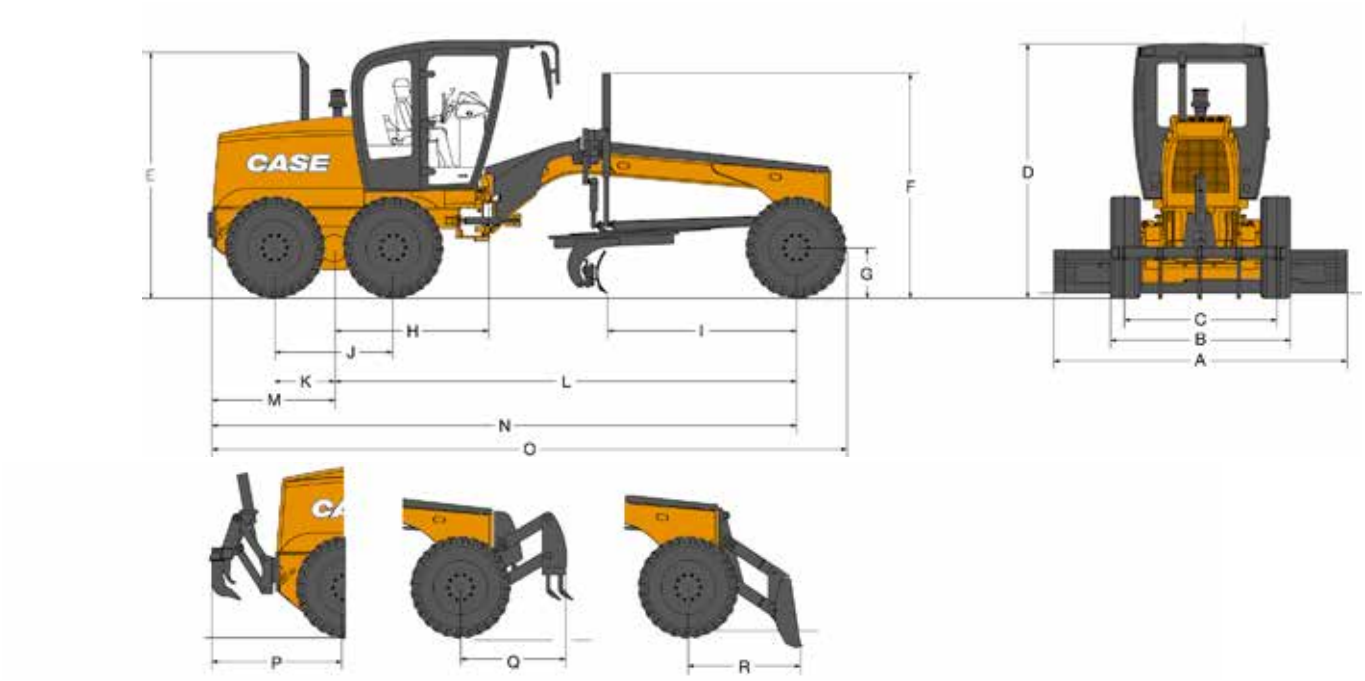
| TRANSMISSION | | 865B | 885B |
|---|---|---|---|
| Make/Model | | ZF TC LOCK UP 6WG – 160 | ZF TC LOCK UP 6WG – 210 |
| Type | | Full Powershift, torque converter | |
| Gears | | 6 forward / 3 reverse | |
| Self-diagnostic system | | On board | |
| | | | |
| Speeds (Forward/Reverse) | | | |
| 1st | km/h | 5,2/5,5 | 4,5/4,8 |
| 2nd | km/h | 8,1/13,1 | 6,9/11,7 |
| 3rd | km/h | 12,4/30,3 | 11,1/27,4 |
| 4th | km/h | 19,2/- | 16,9/- |
| 5th | km/h | 28,7/- | 25,9/- |
| 6th | km/h | 44,1/- | 38,8/- |
| **ELECTRICAL SYSTEM** | | | |
| Power | | 24 V | |
| Alternator | | 90 A | |
| Batteries | | 2x100 Ah - low maintenance | |
| **STEERING** | | | |
| Type | | Hydrostatic | |
| Steering wheel turns (lock to lock) | | 4.5/3.2 | |
| Pump capacity @ 2200 rpm | l/min | 41.8 | |
| Pressure release valve | psi(bar) | 2530 (175 integral with priority valve | |
| Cylinders | | 2 | |
| Supplemental steering | SAE 1011, ISO5012 | Integral with steering system after Supplemental steering | |
| Steering angle | | 42° | |
| **ARTICULATION** | | | |
| Type | | Hydraulically activated (with a lock valve) | |
| Angle | | 25° to the left/right | |
| Controls | | Hydraulic | |
| **CAPACITIES** | | | |
| Engine | l | 15 | |
| Engine with filter | l | 16 | |
| Fuel | l | 360 | |
| Transmission | l | 25 | 29 |
| Transmission with filter | l | 26 | 31 |
| Engine water cooling system | l | 32 | |
| Hydraulic oil tank | l | 90 | |
| Total hydraulic system | l | 148 | |
| Circle turn housing | l | 2.8 | |
| Tandem case (each) | l | 69 | |
| **SADDLE** | | | |
| Locking system | | Two cylinders | |
| Saddle positions | | 5 | |
| **FRAME** | | | |
| Type - Front section | | Box section | |
| Size | mm | 254 x 298 | |
| Type - Rear section | | Beam (welded) | |
| Size | mm | 220.5 x 327 | 220.5 X 327 |
| **DRAWBAR** | | | |
| Type | | “A” frame welded construction with centre mounted circle turn motor | |
| Connection with the frame | | Shim adjustable spherical joint | |
| **CIRCLE** | | | |
| Type | | Welded construction | |
| Maximum ouside diameter | mm | 1752.6 | |
| Rotation | | 360° | |
| Speed | rpm | 1.2 | |
| N° of supports in phenolic resin | | 4 | |

# B-SERIES 2
# MOTOR GRADERS

| MOLDBOARD | | 865B | 885B |
|---|---|---|---|
| Type | | High-carbon steel | |
| Form | | Involute curve | |
| Width | mm | 3962 | 4267 |
| Thickness | mm | 22 | |
| Cutting edge | | 2, interchangeable | |
| Blade pitch positions | | | |
| Normal pitch | | 47° | |
| Minimum pitch | | 42° | |
| Maximum pitch | | 87° | |
| Blade side shift | | | |
| Right | mm | 686 | |
| Left | mm | 533 | |
| Maximum bank-cutting angle (left and right) | | 90° | |
| Ground penetration (max.) | mm | 711.2 | |
| Lift above ground (max.) | mm | 444.5 | |
| Blade side shift and pitch | | Hydraulic type | |
| **FRONT SCARIFIER** | | | |
| Cutting width | mm | 1168 | |
| Teeth | | 5 (opt, 11) | |
| Spacing between teeth | mm | 229 (opt ,114.5) | |
| Lift above ground | mm | 527 | |
| Maximum penetration | mm | 318 | |
| Weight | kg | 570 | |
| **REAR RIPPER** | | | |
| Type | | Parallelogram | |
| Cutting width | mm | 2195 | 2340 |
| Ripper teeth | | 3 (opt, 5) | 3 (opt, 5) |
| Scrifier teeth | | 5 (opt, 9) | 5 (opt, 9) |
| Lift above ground - Ripper teeth | mm | 518 | 518 |
| Maximum penetration - Ripper teeth | mm | 437 | 437 |
| Weight (3/5 teeth) | kg | 795 | 850/890 |
| **DOZER BLADE** | | | |
| Type | | Front mounted | |
| Width | mm | 2762 | |
| Height | mm | 953 | |
| Lift above ground | mm | 622 | |
| Penetration | mm | 165 | |
| Weight | kg | 1165 | |

| OPERATING WEIGHT | | 865B | 885B |
|---|---|---|---|
| Basic machine, cab with heater and A/C, ripper and front counterweight (torque converter transmission ZF, fully service, full fuel tank, lights, standard batteries and 80 kg operator) | kg | **16864**<br>(tires 14.00x24<br>Moldboard 13FT) | **18120**<br>(tires 17.5-25 12PR<br>Moldboard 14FT) |

# GENERAL DIMENSIONS




*All units fitted with 14.0 x 24-12L tires, open ROPS/FOPS cab, standard battery, full fuel tank, operator weigh 80 kg, specifications in accordance with ISO 7134.*

| | | | 865B | 885B |
|---|---|---|---|---|
| A | Blade width | mm | 3962 | 4267 |
| B | Tread width | mm | 2545 | 2583 |
| C | Tread gauge | mm | 2124 | 2162 |
| D | Height on top of h.p. cab | mm | 3400 | 3400 |
| | Height on top of l.p. cab | mm | 3200 | 3200 |
| E | Height of top of exhaust | mm | 3323 | 3323 |
| F | Height to top of blade lift cylinder | mm | 3047 | 3047 |
| G | Tire static radius | mm | 610 | 610 |
| H | Distance between tandem centre and the frame articulation pin | mm | 1958 | 1958 |
| I | Distance between the front axle and the blade | mm | 2562 | 2562 |
| J | Distance between the centre of the rear tires | mm | 1572 | 1624 |
| K | Distance between tandem centre and the wheel | mm | 786 | 812 |
| L | Wheelbase | mm | 6219 | 6219 |
| M | Distance between tandem centre and the rear part of the equipment | mm | 2064 | 2064 |
| N | Distance between the front wheen axle and the rear part of the equipment | mm | 8283 | 8283 |
| O | Overall length | mm | 8957 | 8957 |
| P | Distance between the rear tires and the ripper | mm | 2273 | 2247 |
| Q | Distance between the front tires and the scarifier | mm | 1520 | 1520 |
| R | Distance between the front tires and the dozer blade | mm | 1626 | 1626 |
| | Outside tire turning radius | mm | 7250 | 7250 |
| | Ground clearance (rear axle) | mm | 380 | 380 |
| | Ground clearance (front axle) | mm | 580 | 580 |


CASE

# STANDARD AND OPTIONS

## STANDARD EQUIPMENT

**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
(*) Only available in closed cabins

**ENGINE**
865B FPT F4HE9687C
885B FPT F4HE9687K
Turbocharged, diesel
Dry air filter with primary and secondary safety elements
Air pre-filter with cyclonic dust ejector
80 A alternator
Swing-up hood, diesel

**HYDRAULIC SYSTEM**
Hydraulic system with load sensor, closed centre
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 centre with 8 quick couplers
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**
14" 3-pieces rim / 17,25 x 25 - 12L - G2 tubeless

**OTHERS**
Standard tool kit
Drawbar / Standard circle

**AXLES**
Conventional differential with brakes on 4 wheels and differential locking with electrohydraulic mechanism (rear axle)

**STEERING**
Hydrostatic steering with integrated emergency system

**INSTRUMENTS**
Electronic Information Centre
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
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 certifi ed 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)
Sunshade(front and rear)

**OTHERS**
Air conditioner 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 ripper
Dozer blade float electrovalve
Front counter weight
Lighting on dozer blade

**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

**REAR ATTACHMENT**
Medium ripper with 3 large teeth and 5 small teeth
2 additional large teeth and 4 additional small teeth
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/FL OATING/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**
9" Rim - single piece/14x24 tire-12L-G2
10" Rim - 3 pieces / 14x24 tire - 12L - G2
13" Rim - single piece / 17.5x25 tire - 12L - L2
14" Rim - 3 pieces / 17.5x25 tire - 16L - L3

**TIRES WITH TUBES**
9" Rim - single piece / 14x24 tire - 12L - G2
10" Rim - 3 pieces / 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
10" Rim - 3 pieces with valve
13" Rim - single piece with valve
14" Rim - 3 pieces with valve

**All the options are subject to the local availability.*

CASE CONSTRUCTION

SINCE 1842

# BUILDING A STRONG CASE.

Since 1842, at CASE Construction Equipment we have lived by an unwavering commitment to build practical, intuitive solutions that deliver both efficiency and productivity.

We continually strive to make it easier for our customers to implement emerging technologies and new compliance mandates.

Today, our global scale combined with our local expertise enables us to keep customers' real-world challenges at the centre of our product development.

The vast CASE dealers' network is always ready to support and protect your investment and exceed your expectations, while also providing you with the ultimate ownership experience.

Our goal is to build both stronger machines—and stronger communities. At the end of the day, we do what's right for our customers and our communities so that they can count on CASE.

**CASECE.com**

NOTE: Standard and optional fittings can vary according to the demands and specific regulations of each country. The illustrations may include optional rather than standard fittings - consult your CASE dealer. Furthermore, CNH Industrial reserves the right to modify machine specifications without incurring any obligation relating to such changes.

Conforms to directive 2006/42/EC

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