

# CASE

## WHEEL LOADERS

# 721E - 721EXT - 821E



|                         | <b>721E</b>                | <b>721EXT</b>              | <b>821E</b>                |
|-------------------------|----------------------------|----------------------------|----------------------------|
| Engine Horsepower       | 137 kW/183 hp              | 137 kW/183 hp              | 159 kW/213 hp              |
| Operating weight (max.) | 14 500 kg                  | 14 650 kg                  | 17 166 kg                  |
| Bucket capacity         | 2.40 - 2.70 m <sup>3</sup> | 2.40 - 2.70 m <sup>3</sup> | 2.80 - 3.30 m <sup>3</sup> |

P R O F E S S I O N A L P A R T N E R

## EXTRA CONTROL

Torque sensing autoshift transmission with integrated shuttle switch offers directional control. Auto return to work feature and optional Ride Control system reduce operator fatigue and lower cycle times, boosting productivity.

**Operator comfort. High production.**

## ENVIRONMENT FOR OPERATORS

Longer and wider cab offers improved interior space, additional legroom and one of the lowest noise levels in the industry. Easy to reach switch layout and single servo lever for major controls reduce operator fatigue and improve productivity. Optional ride control and air conditioning further boost operator performance.

**Total comfort. Maximum productivity.**

## EFFECTIVE DESIGN

Mid-mounted cooling module located for improved weight distribution. Engine acts as counterweight to reduce overall weight.

**Efficient distribution. Solid stability.**



## ESSENTIAL COMPONENTS

Mid-mounted cooling module ensures constant temperature for increased component life.

Automatic reversible fan keeps radiator cores clean, reducing downtime.

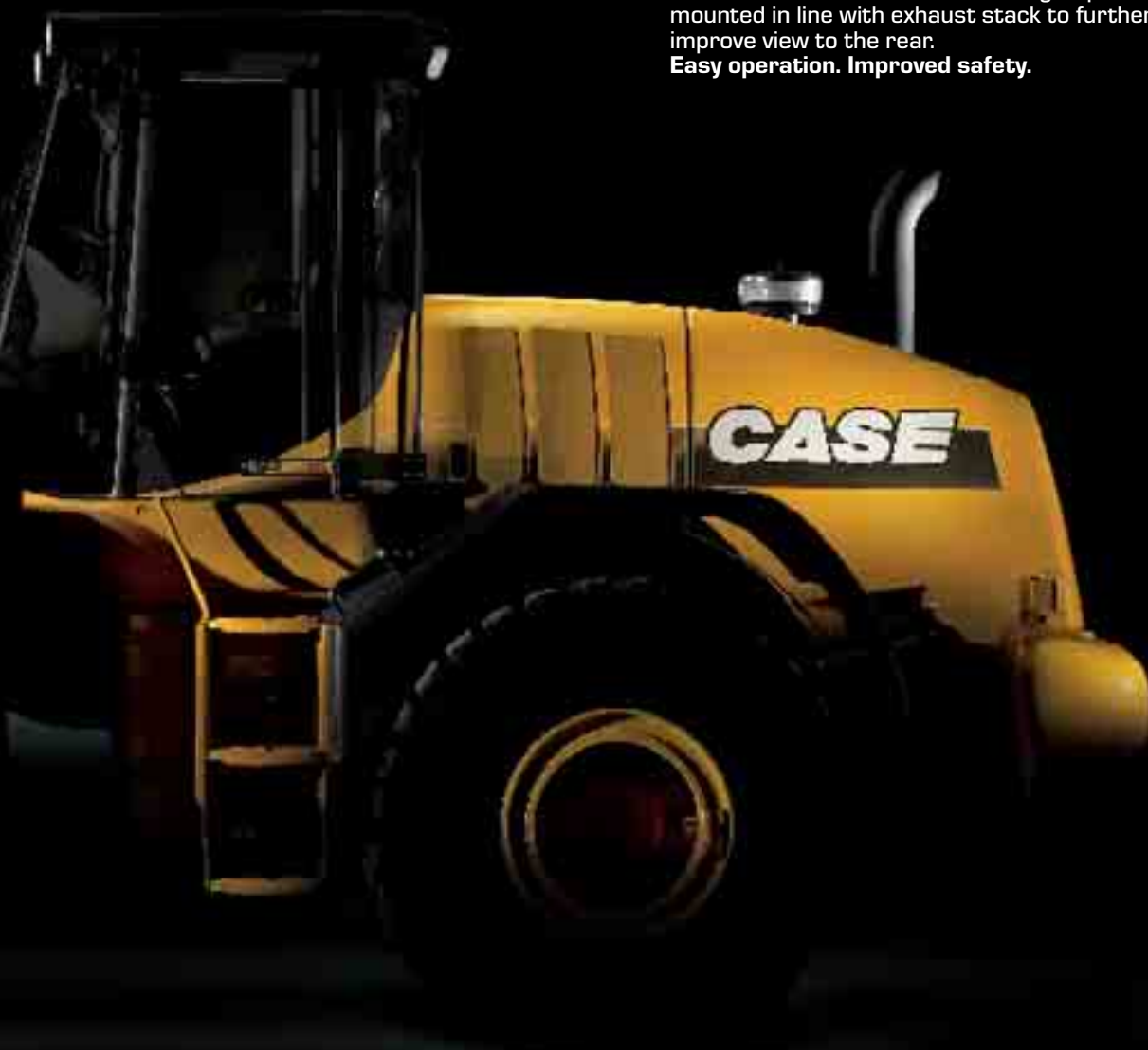
**Working well. Working productively.**

## EXCEPTIONAL ACCESS

One piece electric lift canopy allows easy access to all engine components for service and regular maintenance. Daily checks can be carried out from ground level and the machines have remote fluid drains to ensure no contamination of the ground. **Environmentally friendly. Maximised uptime.**

## EXCELLENT VISIBILITY

Reduced engine canopy height improves rearward visibility, while full height glass offers improved view of attachments and front wheels. Engine pre-cleaner mounted in line with exhaust stack to further improve view to the rear. **Easy operation. Improved safety.**



## ECONOMY AND PERFORMANCE

Case 667TA/EED common rail electronically-controlled engine offers a choice of three power levels to maximise efficiency. Working modes match engine and hydraulic power to the application, while auto idle function cuts noise and reduces fuel consumption.

**High power. Low consumption.**

## ENGINE



The 721E and 821E are powered by a Tier III Case 667TA/EED diesel. This electronically-controlled 6.7 litre engine provides a choice of three power and torque ratings, designed to perfectly match the requirements of the machine in any application, maximising fuel economy.

There are four Working Modes, controlled by the operator from a console in the cab. Standard is for use in normal operating, offering the engine's rated output with maximum hydraulic power and flow. Max Power provides a 5.5 per cent power boost in the 721E, and an 11 per cent net power gain for the 821E. This mode is intended for extreme operating conditions.

For lighter duties, there is Economy, which drops the engine revs and power output, reducing fuel consumption and noise further. The final operating mode is Auto Power; which matches the engine's power curve to the digging application. Electronic control also allows for three engine idle settings, increasing engine efficiency and reducing fuel consumption.

## FRONT VISIBILITY



The 721E and 821E benefit from an ergonomically designed cab that is far larger than on the D series machines. The pillarless floor-to-ceiling glazing to the front and sides of the machine offers an unparalleled view of the bucket or attachment.

The operator has a clear view of the front wheels, aiding manoeuvrability and making the machine easier to place accurately in a stock handling or loading operation. This reduces cycle times and increases productivity.

Redesigned front fenders ensure that the glass stays clear in even the worst ground conditions, while powerful windscreen wipers keep the main window clear in all weathers.

The central control console is compact, yet easy to read, providing a clear view to the lift arms and bucket link, ensuring safe operation in all site conditions.

## REAR VISIBILITY



At the rear of the machines a contoured one-piece engine canopy drops away from the line of sight to give an excellent view behind the operator. The engine air pre-cleaner and exhaust stack are positioned in line in the centre of the canopy to further increase visibility over the back of the machine.

A large single rear screen, with pillars level with the operator, ensures an unbroken view to the rear three-quarters of the 721E and 821E. This is essential for a wheeled loader operator in a stocking and loading operation, and also for the XT machine in a materials handling situation.

A rear windscreen wiper is standard, ensuring that the view to the rear of the machine stays clear whatever the weather, minimising downtime and maximising productivity. Optional rear view camera systems can be fitted to both machines to further improve safety in mineral extraction operations.

## OPERATOR'S CAB

Both the 721E and 821E feature a greatly enlarged operator's cab. The tapered cab design is both longer and wider than on the D Series machines, offering more internal space for the driver and noise levels that are among the quietest in the industry.

The full height door on the left hand side of the cab can be opened to 180 degrees, and locked in position, reducing any risk of damage. This provides excellent access to the cab for the operator.

On the right hand side of the machine the window can be opened slightly for increased air flow, or opened to 180 degrees and locked for maximum cross cab ventilation. Full cab air-conditioning is available as an option. There is plenty of storage in the cab, including a cool box when air conditioning is fitted.





The ergonomically designed Case wheel loaders can be specified with Ride Control, a system that allows the lift arms to float when the machine is moving, preventing bounce in the cab and at the wheels. Ride Control allows the operator to drive at higher speeds during load and carry operations, offering excellent load retention and reducing fatigue for the operator.

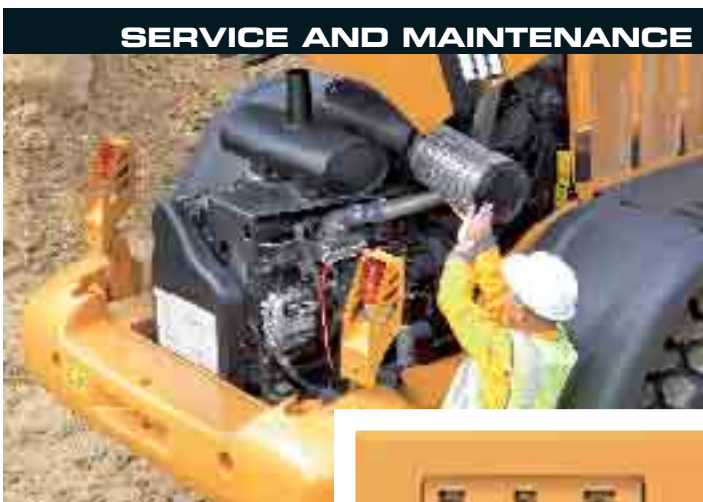
The system has three operating modes, fully on, off, to allow full hydraulic power during loading and digging operations, and an automatic setting, which engages Ride Control when the machine accelerates above 3mph.

The Ride Control system also reduces shock loadings in the chassis and in the operator's cab, prolonging component life and reducing operating costs for the owner and reducing fatigue and effort for the driver.



The 721E and 821E wheel loaders use a torque sensing autoshift transmission with four forward gears and three reverse ratios. The operator can opt for manual control of the transmission, or the gears can be shifted automatically as required. Forward and reverse shifting can be controlled using a shuttle switch in the head of the main hydraulic servo lever, allowing the operator to continue to work the attachment while changing direction.

Both axles feature limited slip differentials, to maximise traction and boost productivity. All four wheels are braked, using hydraulically-actuated maintenance-free wet disc brakes.



With the mid-mounted cooling module, the engine sits right at the rear of the machine, beneath a single-piece electrically-operated engine cover. The engine therefore contributes to the machine counterweight, reducing the need for additional counterweight at the rear.

This means that all daily checks can be easily reached from ground level, with fluid sight gauges on all reservoirs.

There are remote fluid drain taps for the engine oil, coolant and hydraulic oil, ensuring an environmentally-friendly service with no loss of fluids. Grease points are centrally located, to reduce downtime and increase productivity. All bucket pins have seals to protect against debris infiltration. This split seal is easy to replace, ensuring long pin and bush life.

Service personnel can access the machine diagnostic systems from within the cab using compatible electronic service tools.











# SPECIFICATIONS

## ENGINE

Model Case \_\_\_\_\_ Family IV 667TA/EED, Tier III certified  
 Type \_\_\_\_\_ 6 cyl., turbocharged and air-to-air cooled  
 Bore/Stroke \_\_\_\_\_ 104 X 132 mm  
 Displacement \_\_\_\_\_ 6.7 L  
 Fuel injection \_\_\_\_\_ Electronic  
 Fuel filter \_\_\_\_\_ Replaceable, full flow spin-on cartridge  
 Fuel cooler \_\_\_\_\_  
 Air filter \_\_\_\_\_ Dry type element w/warning restriction indicator  
 Mid-mount cooling module \_\_\_\_\_  
 External independent mounted coolers \_\_\_\_\_  
 Pump operating angle ratings \_\_\_\_\_  
 Side-to-side \_\_\_\_\_ Rated 35°  
 Fore and aft \_\_\_\_\_ Rated 35°  
 Oil filtration \_\_\_\_\_ Replaceable, full flow spin-on cartridge  
 Engine speeds - Rated speed, full load \_\_\_\_\_ 2000 rpm  
 Horsepower - Peak \_\_\_\_\_  
 Max Power \_\_\_\_\_  
 Gross \_\_\_\_\_ 195 hp [145 kW] @ 2000 rpm  
 Net \_\_\_\_\_ 183 hp [137 kW] @ 2000 rpm  
 Standard Power \_\_\_\_\_  
 Gross \_\_\_\_\_ 182 hp [136 kW] @ 1900 rpm  
 Net \_\_\_\_\_ 172 hp [128 kW] @ 1800 rpm  
 Economy Power \_\_\_\_\_  
 Gross \_\_\_\_\_ 157 hp [117 kW] @ 1500 rpm  
 Net \_\_\_\_\_ 149 hp [111 kW] @ 1500 rpm

NOTE: Gross horsepower and torque per SAE J1995.  
 Net horsepower and torque per SAE J1349.

Torque - Peak \_\_\_\_\_  
 Max Power \_\_\_\_\_  
 Gross \_\_\_\_\_ 862 Nm@ 1400 rpm  
 Net \_\_\_\_\_ 821 Nm@ 1400 rpm  
 Standard Power \_\_\_\_\_  
 Gross \_\_\_\_\_ 847 Nm@ 1400 rpm  
 Net \_\_\_\_\_ 809 Nm@ 1300 rpm  
 Economy Power \_\_\_\_\_  
 Gross \_\_\_\_\_ 832 Nm@ 1200 rpm  
 Net \_\_\_\_\_ 800 Nm@ 1200 rpm  
 Torque rise \_\_\_\_\_  
 Standard power @ 2000 rpm \_\_\_\_\_ 31.4%

## DRIVETRAIN

Transmission \_\_\_\_\_  
 4F/3R Proportional w/Electronic Control \_\_\_\_\_  
 Module torque sensing autoshift/manual shift and modulation \_\_\_\_\_  
 Differential \_\_\_\_\_ Limited slip on front and rear axles  
 Rear axle oscillation \_\_\_\_\_ 24° total  
 Service brakes \_\_\_\_\_  
 Hydraulically actuated, maintenance-free, multiple wet disc with accumulator to all four wheels \_\_\_\_\_  
 Parking brakes \_\_\_\_\_  
 Spring-applied hydraulic release disc on transmission output shaft \_\_\_\_\_  
 Travel speeds - km/h with 20.5x25 L3 Tires \_\_\_\_\_  

|     | Forward | Reverse |
|-----|---------|---------|
| 1st | 7.6     | 8.0     |
| 2nd | 13.3    | 14.0    |
| 3rd | 24.6    | 25.7    |
| 4th | 38      | NA      |

NOTE: Travel speeds at full engine throttle.

## ELECTRICAL

Voltage \_\_\_\_\_ 24 Volts, negative ground  
 Alternator \_\_\_\_\_ 65 amp  
 Batteries \_\_\_\_\_ (2) 12-Volt

## HYDRAULICS

Pump (steering/implement) \_\_\_\_\_  
 Closed centered pressure/flow compensated \_\_\_\_\_  
 Variable displacement \_\_\_\_\_ 119.6 L/min @ 2000 rpm @ 24 821 kPa  
 Implement pump Closed centered pressure/flow compensated \_\_\_\_\_  
 Variable displacement 85.6 L/min @ 2000 rpm @ 24 821 kPa  
 Filtration \_\_\_\_\_  
 10-micron, full flow replaceable cartridges on return line, condition indicator light for filter.

## CYCLE TIME

Raise w/rated bucket load \_\_\_\_\_ 5.59 sec  
 Dump w/rated bucket load \_\_\_\_\_  
 Z-Bar \_\_\_\_\_ 1.8 sec  
 XT \_\_\_\_\_ 1.9 sec  
 Lower "empty" \_\_\_\_\_  
 Power down \_\_\_\_\_ 3.29 sec  
 Float down \_\_\_\_\_ 3.29 sec

## SERVICE CAPACITIES

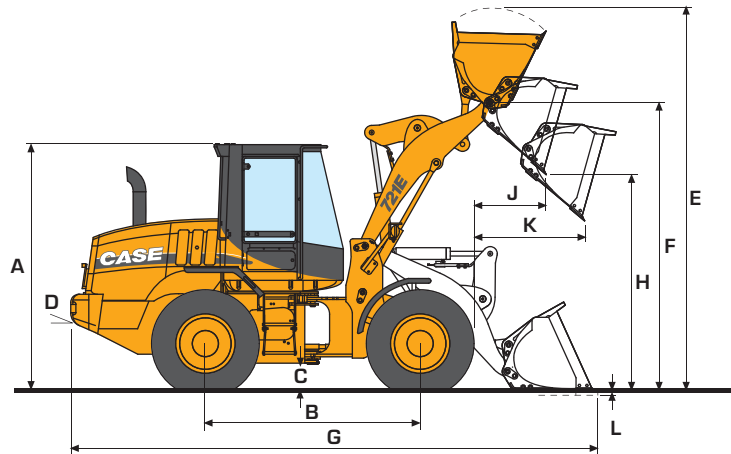
Fuel tank \_\_\_\_\_ 246 l  
 Hydraulic system \_\_\_\_\_  
 Total \_\_\_\_\_ 193.1 l  
 Reservoir \_\_\_\_\_ 105.7 l  
 Transmission \_\_\_\_\_  
 Service with filter \_\_\_\_\_ 25.6 l  
 Front and rear axle \_\_\_\_\_  
 Front axle \_\_\_\_\_ 30.3 l  
 Rear axle \_\_\_\_\_ 27.4 l  
 Engine oil with filter \_\_\_\_\_ 14.2 l  
 Cooling system (-40) \_\_\_\_\_ 36.9 l

## OPERATING WEIGHTS

Z-Bar \_\_\_\_\_  
 Unit equipped with ROPS cab with heater and A/C, full counterweight, 20.5R25 XTLA Michelin tires, 2.4 m<sup>3</sup> bucket and quick coupler, full fuel, 79 kg operator \_\_\_\_\_ 14 500 kg

XT \_\_\_\_\_  
 Unit equipped with ROPS cab with heater and A/C, full counterweight, 20.5R25 XTLA Michelin tires, standard batteries, full fuel, 79 kg operator: \_\_\_\_\_  
 with 2.4 m<sup>3</sup> bucket and quick coupler \_\_\_\_\_ 14 650 kg  
 with pallet fork \_\_\_\_\_ 13 730 kg

# GENERAL DIMENSIONS 721E



## DIMENSIONS

|                      |                              |    |      |
|----------------------|------------------------------|----|------|
| <b>A</b>             | Height to top of ROPS cab    | mm | 3404 |
| <b>B</b>             | Wheelbase                    | mm | 3253 |
| <b>C</b>             | Ground clearance             | mm | 365  |
| <b>D</b>             | Angle of departure           |    | 32°  |
| <b>Width</b>         |                              |    |      |
|                      | - Overall* w/o bucket        | mm | 2550 |
|                      | - Centerline tread           | mm | 2029 |
|                      | Turning radius* - outside    | mm | 5750 |
| <b>Turning angle</b> |                              |    |      |
|                      | - From center                |    | 40°  |
|                      | - Total angle                |    | 80°  |
|                      | Rear axle oscillation, total |    | 24°  |

NOTE: \*Dimensions taken with 20.5R25 Michelin XTLA tires.

## WEIGHT ADJUSTMENTS Select Options

|                         | Weight Adj. (kg) | Tipping Load Adj. Straight (kg) | Tipping Load Adj. 40° Turn (kg) |
|-------------------------|------------------|---------------------------------|---------------------------------|
| 20.5 25 12 ply L2 tires | - 58             | - 48                            | - 42                            |
| 20.5 25 12 ply L3 tires | +103             | +84                             | +74                             |
| 20.5R 25 XHA TL tires   | +172             | +140                            | +124                            |
| Standard counterweight  | -555             | -1314                           | -1112                           |

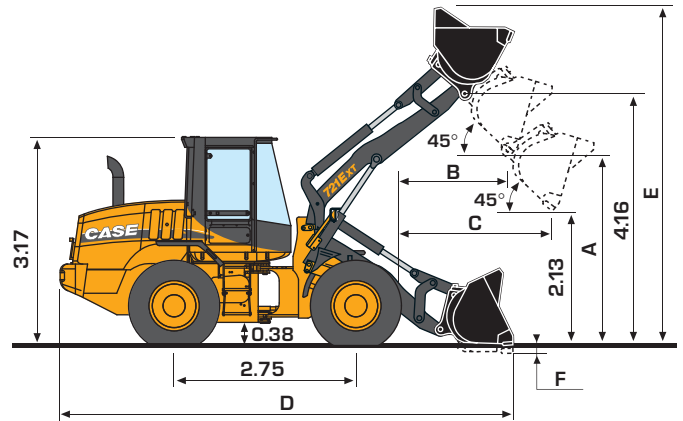
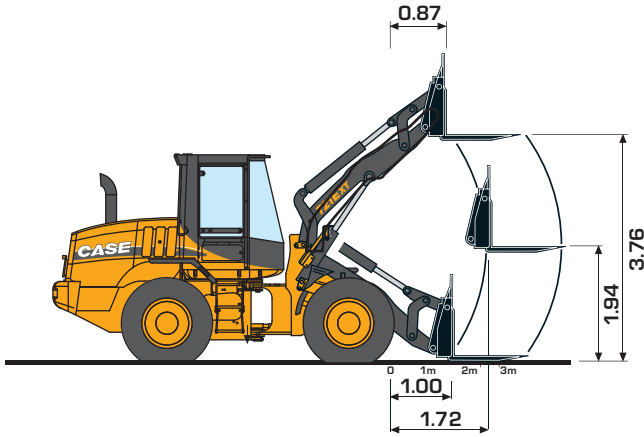
## PERFORMANCE DATA

### 721E Z-Bar\*

|   |                   | 2.5 m <sup>3</sup><br>Bucket<br>w/Bolt-on Edge | 2.5 m <sup>3</sup><br>Bucket<br>w/Teeth | 2.7 m <sup>3</sup><br>Bucket<br>w/Bolt-on Edge | 2.7 m <sup>3</sup><br>Bucket<br>w/Teeth | 2.4 m <sup>3</sup><br>Bucket<br>w/Bolt-on Edge | 2.4 m <sup>3</sup><br>Bucket<br>w/Teeth |
|---|-------------------|--|---|--|---|--|---|
| SAE bucket capacity - heaped                          | m <sup>3</sup>    | 2.50   | 2.50                                    | 2.70   | 2.70                                    | 2.40   | 2.40                                    |
| Bucket width - outside                                | mm                | 2500   | 2500                                    | 2540   | 2540                                    | 2474   | 2474                                    |
| Bucket weight   | kg                | 1186   | 1273                                    | 1260   | 1347                                    | 1656   | 1619                                    |
| <b>E</b> Operating height - fully raised w/spillguard | mm                | 5230   | 5230                                    | 5300   | 5300                                    | 5510   | 5510                                    |
| <b>F</b> Hinge pin height - fully raised              | mm                | 3980   | 3980                                    | 3980   | 3980                                    | 3980   | 3980                                    |
| <b>G</b> Overall length - bucket level on ground      | mm                | 7650   | 7800                                    | 7710   | 7860                                    | 7820   | 7940                                    |
| Dump angle - fully raised                             |                   | 55°  | 55°                                     | 55°  | 55°                                     | 61°  | 61°                                     |
| <b>H</b> Dump height - fully raised, 45° dump         | mm                | 2930   | 2830                                    | 2890   | 2790                                    | 2820   | 2740                                    |
| <b>J</b> Bucket reach - fully raised, 45° dump        | mm                | 1130   | 1230                                    | 1170   | 1280                                    | 1270   | 1360                                    |
| <b>K</b> Bucket reach - 2.13m height, 45° dump        | mm                | 1660   | 1720                                    | 1690   | 1740                                    | 1760   | 1800                                    |
| Operating load - ISO                                  | kg                | 5460   | 5405                                    | 5430   | 5375                                    | 5455   | 5480                                    |
| Maximum material density - ISO                        | kg/m <sup>3</sup> | 2196   | 2175                                    | 2029   | 2008                                    | 2273   | 2283                                    |
| <b>Tipping load - ISO</b>                             |                   |  |   |  |   |  |   |
| - Straight  | kg                | 12 590   | 12 480                                  | 12 530   | 12 420                                  | 12 630   | 12 680                                  |
| - 40° turn  | kg                | 10 920   | 10 810                                  | 10 860   | 10 750                                  | 10 910   | 10 960                                  |
| Breakout force w/tilt cylinder                        | kg                | 14 260   | 14 180                                  | 13 520   | 12 050                                  | 12 200   | 11 300                                  |
| <b>Maximum rollback</b>                               |                   |  |   |  |   |  |   |
| - Ground  |                   | 39°  | 40°                                     | 39°  | 40°                                     | 34°  | 34°                                     |
| - Carry position                                      |                   | 43°  | 43°                                     | 43°  | 43°                                     | 38°  | 38°                                     |
| - @ Maximum reach                                     |                   | 54°  | 54°                                     | 54°  | 54°                                     | 49°  | 49°                                     |
| - @ Full height                                       |                   | 57°  | 57°                                     | 57°  | 57°                                     | 51°  | 51°                                     |
| <b>L</b> Dig depth                                    | mm                | 76   | 84                                      | 76   | 84                                      | 60   | 65                                      |
| Maximum grading angle w/bucket - back dragging        |                   | 60°  | 61°                                     | 60°  | 61°                                     | 67°  | 69°                                     |
| Loader clearance circle                               | mm                | 12 640   | 12 760                                  | 12 680   | 12 800                                  | 12 600   | 12 680                                  |

NOTE: \*Z-Bar performance data shown w/full counterweight. Performance data unit equipped with 20.5R25 Michelin XTLA tires, ROPS cab w/heater and A/C, full counterweight, standard batteries, front and rear fenders, full fuel and 75 kg operator. Specifications per SAE J732, J1234, J695, J742, and J818.

# GENERAL DIMENSIONS 721EXT



## DIMENSIONS

|                      |                              |    |      |
|----------------------|------------------------------|----|------|
| <b>A</b>             | Height to top of ROPS cab    | mm | 3404 |
| <b>B</b>             | Wheelbase                    | mm | 3253 |
| <b>C</b>             | Ground clearance             | mm | 365  |
| <b>D</b>             | Angle of departure           |    | 32°  |
| <b>Width</b>         |                              |    |      |
|                      | - Overall* w/o bucket        | mm | 2550 |
|                      | - Centerline tread           | mm | 2029 |
|                      | Turning radius* - outside    | mm | 5750 |
| <b>Turning angle</b> |                              |    |      |
|                      | - From center                |    | 40°  |
|                      | - Total angle                |    | 80°  |
|                      | Rear axle oscillation, total |    | 24°  |

## WEIGHT ADJUSTMENTS

| Select Options          | Weight Adj. (kg) | Tipping Load Adj. Straight (kg) | Tipping Load Adj. 40° Turn (kg) |
|-------------------------|------------------|---------------------------------|---------------------------------|
| 20.5 25 12 ply L2 tires | - 58             | - 48                            | - 42                            |
| 20.5 25 12 ply L3 tires | +103             | +84                             | +74                             |
| 20.5R 25 XHA TL tires   | +172             | +140                            | +124                            |

## 721EXT WITH PALLET FORKS

|                                |    |      |
|--------------------------------|----|------|
| Fork length                    | mm | 1222 |
| Fork weight (includes coupler) | kg | 690  |
| <b>Tipping load - ISO</b>      |    |      |
| - Straight                     | kg | 8411 |
| - 40° turn                     | kg | 7101 |
| Operating load - rough ground  | kg | 4261 |

NOTE: \*Dimensions taken with 20.5R25 Michelin XTLA tires.

## PERFORMANCE DATA

### 721E/XT

|  |                   | Bucket with quick coupler                   |                                      |
|--|-------------------|---|--------------------------------------|
|  |                   | 2.4 m <sup>3</sup><br>Bucket w/bolt-on edge | 2.4 m <sup>3</sup><br>Bucket w/teeth |
| SAE bucket capacity - heaped                           | m <sup>3</sup>    | 2.40  | 2.40                                 |
| Bucket width - outside                                 | mm                | 2474  | 2474                                 |
| Bucket weight  | kg                | 1630  | 1590                                 |
| <b>E</b> Operating height - fully raised w/ spillguard | mm                | 5668  | 5668                                 |
| <b>F</b> Hinge pin height - fully raised               | mm                | 4161  | 4161                                 |
| <b>G</b> Overall length - bucket level on ground       | mm                | 8117  | 8236                                 |
| Dump angle - fully raised                              |                   | 54°   | 54°                                  |
| <b>H</b> Dump height - fully raised, 45° dump          | mm                | 2769  | 2691                                 |
| <b>J</b> Bucket reach - fully raised, 45° dump         | mm                | 1272  | 1357                                 |
| <b>K</b> Bucket reach - 2.13m height, 45° dump         | mm                | 1748  | 1788                                 |
| Operating load - ISO                                   | kg                | 5622  | 5645                                 |
| Maximum material density - ISO                         | kg/m <sup>3</sup> | 2343  | 2252                                 |
| <b>Tipping load - ISO</b>                              |                   |   |                                      |
| - Straight   | kg                | 13 000                                      | 13 047                               |
| - 40° turn   | kg                | 11 243                                      | 11 290                               |
| Breakout force w/ tilt cylinder                        | kg                | 12 016                                      | 11 194                               |
| <b>Maximum rollback</b>                                |                   |   |                                      |
| - Ground   |                   | 58°   | 58°                                  |
| - Carry position                                       |                   | 58°   | 58°                                  |
| - @ Maximum reach                                      |                   | 55°   | 55°                                  |
| - @ Full height  |                   | 59°   | 59°                                  |
| <b>L</b> Dig depth                                     | mm                | 206   | 211                                  |
| Maximum grading angle w/ bucket - back dragging        |                   | 61°   | 62°                                  |
| Loader clearance circle                                | mm                | 12 491                                      | 12 544                               |

NOTE: \*Z-Bar performance data shown w/full counterweight. Performance data unit equipped with 20.5R25 Michelin XTLA tires, ROPS cab w/heater and A/C, full counterweight, standard batteries, front and rear fenders, full fuel and 75 kg operator. Specifications per SAE J732, J1234, J695, J742, and J818.

# HYDRAULIC QUICK COUPLERS

The 721E can be specified with a heavy duty Z-bar linkage for high productivity digging and loading operations, or with an XT tool carrier linkage for materials handling duties. The 721EXT offers true parallel lift throughout the loading cycle, for maximum safety and efficiency when used with pallet forks and other materials handling attachments. To further increase the versatility and productivity of the 721EXT, the machine can be equipped with a hydraulic quick coupler. This enables the rapid changing of attachments from the driver's seat. The Case quick coupler is compatible with a wide range of materials handling attachments.



# SPECIFICATIONS

## ENGINE

Model \_\_\_\_\_ Case Family IV, 667TA/EBD Tier III Certified  
 Type \_\_\_\_\_ 6 cyl., turbocharged and air-to-air cooled  
 Bore/Stroke \_\_\_\_\_ 104 x 132 mm  
 Displacement \_\_\_\_\_ 6.7 L  
 Fuel injection \_\_\_\_\_ Electronic  
 Fuel filter \_\_\_\_\_ Replaceable, full flow spin-on cartridge  
 Fuel cooler \_\_\_\_\_  
 Air filter \_\_\_\_\_ Dry type element w/warning restriction indicator  
 Mid-mount cooling module \_\_\_\_\_  
 External independant mounted coolers \_\_\_\_\_  
 Pump operating angles \_\_\_\_\_  
 Side-to-side \_\_\_\_\_ 35°  
 Fore and aft \_\_\_\_\_ 35°  
 Oil filtration \_\_\_\_\_ Replaceable, full flow, spin-on cartridge  
 Engine speeds - Rated speed, full load \_\_\_\_\_ 2000 rpm  
 Horsepower - Peak \_\_\_\_\_  
 Max Power Range \_\_\_\_\_  
 Gross \_\_\_\_\_ 227 hp (169 kW) @ 2000 rpm  
 Net \_\_\_\_\_ 213 hp (159 kW) @ 2000 rpm  
 Standard Power Range \_\_\_\_\_  
 Gross \_\_\_\_\_ 210 hp (157 kW) @ 1800 rpm  
 Net \_\_\_\_\_ 198 hp (148 kW) @ 1800 rpm  
 Economy Power Range \_\_\_\_\_  
 Gross \_\_\_\_\_ 190 hp (142 kW) @ 1500 rpm  
 Net \_\_\_\_\_ 181 hp (135 kW) @ 1500 rpm

NOTE: Gross horsepower and torque per SAE J1995. Net horsepower and torque per SAE J1349.

Torque - Peak \_\_\_\_\_  
 Max Power Range \_\_\_\_\_  
 Gross \_\_\_\_\_ 1002 N·m @ 1400 rpm  
 Net \_\_\_\_\_ 966 N·m @ 1400 rpm  
 Standard Power Range \_\_\_\_\_  
 Gross \_\_\_\_\_ 982 N·m @ 1400 rpm  
 Net \_\_\_\_\_ 950 N·m @ 1300 rpm  
 Economy Power Range \_\_\_\_\_  
 Gross \_\_\_\_\_ 966 N·m @ 1200 rpm  
 Net \_\_\_\_\_ 940 N·m @ 1200 rpm  
 Torque rise \_\_\_\_\_  
 Standard power @ 2000 rpm \_\_\_\_\_ 32.2%

## DRIVETRAIN

Transmission \_\_\_\_\_  
 4F/3R Proportional w/Electronic Control \_\_\_\_\_  
 Module torque sensing autoshift/manual shift and modulation \_\_\_\_\_  
 Differential Limited slip w/45% transfer on front and rear axles \_\_\_\_\_  
 Rear axle oscillation \_\_\_\_\_ 24° total  
 Service brakes \_\_\_\_\_  
 Hydraulically actuated, maintenance-free, multiple wet disc w/accumulator to all four wheels \_\_\_\_\_  
 Parking brakes \_\_\_\_\_  
 Spring-applied hydraulic release disc on transmission output shaft \_\_\_\_\_  
 Travel speeds - km/h with 23.5-25 L3 Tires \_\_\_\_\_

|     | Forward | Reverse |
|-----|---------|---------|
| 1st | 7.1     | 7.9     |
| 2nd | 12.6    | 13.8    |
| 3rd | 23.3    | 25.3    |
| 4th | 37.0    | NA      |

NOTE: Travel speeds at full engine throttle.

## ELECTRICAL

Voltage \_\_\_\_\_ 24 Volts, negative ground  
 Alternator \_\_\_\_\_ 70 amp  
 Batteries \_\_\_\_\_ 2 x 24 volt

## HYDRAULICS

Pump (steering/implement) \_\_\_\_\_  
 Closed centered pressure/flow compensated \_\_\_\_\_  
 Variable displacement \_ 119.6 L/min @ 2000 rpm @ 24 821 kPa  
 Implement pump Closed centered pressure/flow compensated \_\_\_\_\_  
 Variable displacement 120 L/min @ 2000 rpm @ 24 821 kPa  
 Filtration \_\_\_\_\_  
 10-micron, full flow replaceable cartridges on return line, condition indicator light for filter \_\_\_\_\_

## CYCLE TIME

Raise w/rated bucket load \_\_\_\_\_ 5.6 sec  
 Dump w/rated bucket load \_\_\_\_\_ 1.2 sec  
 Lower \_\_\_\_\_ (empty)  
 Power down \_\_\_\_\_ 2.8 sec  
 Float down \_\_\_\_\_ 2.2 sec

## SERVICE CAPACITIES

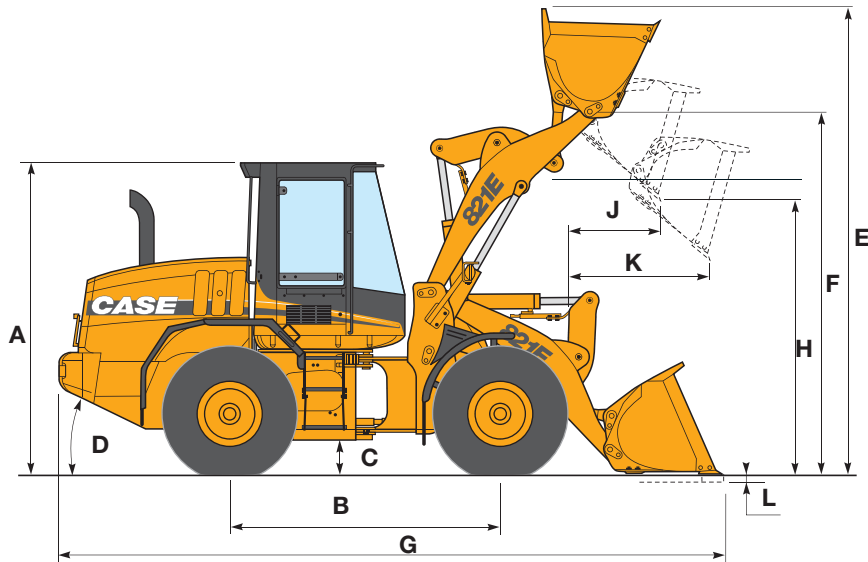
Fuel tank \_\_\_\_\_ 288 L  
 Hydraulic system \_\_\_\_\_  
 Total \_\_\_\_\_ 174 L  
 Reservoir \_\_\_\_\_ 90 L  
 Transmission \_\_\_\_\_  
 Service w/filter \_\_\_\_\_ 39.7 L  
 Front and rear axle \_\_\_\_\_  
 Front \_\_\_\_\_ 37.4 L  
 Rear \_\_\_\_\_ 23.7 L  
 Engine oil w/filter \_\_\_\_\_ 21 L  
 Cooling system \_\_\_\_\_ 40.9 L

## OPERATING WEIGHTS

### Z-Bar

Unit equipped with ROPS cab with heater and A/C, full counterweight, 23.5-25 XHATL Michelin tires, front and rear fenders, 2.70 m<sup>3</sup> general purpose loader bucket, full fuel, 79 kg operator \_\_\_\_\_ 17 166 kg

# GENERAL DIMENSIONS 821E



## DIMENSIONS

|                      |                              |    |      |
|----------------------|------------------------------|----|------|
| <b>A</b>             | Height to top of ROPS cab    | mm | 3450 |
| <b>B</b>             | Wheelbase                    | mm | 3340 |
| <b>C</b>             | Ground clearance             | mm | 416  |
| <b>D</b>             | Angle of departure           |    | 33°  |
| <b>Width</b>         |                              |    |      |
|                      | - Overall* w/o bucket        | mm | 2890 |
|                      | - Centerline tread           | mm | 2230 |
|                      | Turning radius* - outside    | mm | 6032 |
| <b>Turning angle</b> |                              |    |      |
|                      | - From center                |    | 40°  |
|                      | - Total angle                |    | 80°  |
|                      | Rear axle oscillation, total |    | 24°  |

NOTE: \*Dimensions taken with 23.5-25 XHATL tires.

## WEIGHT ADJUSTMENTS

Select Options

| Select Options     | Weight Adj. (kg) | Tipping Load Adj. Straight (kg) | Tipping Load Adj. 40° Turn (kg) |
|--------------------|------------------|---------------------------------|---------------------------------|
| Base counterweight | -680             | -1637                           | -1381                           |
| L2BIAS tires       | -506             | -406                            | -358                            |
| L3BIAS tires       | -218             | -175                            | -154                            |

NOTE: \*\*Unit equipped with Z-Bar loader arms, 3.2 m<sup>3</sup> general purpose pin on bucket w/ bolt-on edge, 23.5-25 XHATL tires, ROPS cab with heater/AC, full counterweight, heavy-duty batteries, front and rear fenders, full fuel and 79 kg operator. Adjust select options from rated weight.

## PERFORMANCE DATA

### 821E Z-Bar

|  |                   | 3.4 m <sup>3</sup><br>Bucket<br>w/Bolt-on Edge | 3.2 m <sup>3</sup><br>Bucket<br>w/Bolt-on Edge | 3.2 m <sup>3</sup><br>Bucket w/Teeth | 2.6 m <sup>3</sup><br>Bucket<br>w/Bolt-on Edge | 2.6 m <sup>3</sup><br>Bucket w/Teeth |
|--|-------------------|--|--|--------------------------------------|--|--------------------------------------|
| SAE bucket capacity - heaped                           | m <sup>3</sup>    | 3.39   | 3.17   | 3.17                                 | 2.63   | 2.63                                 |
| Bucket width - outside                                 | mm                | 2930   | 2930   | 3050                                 | 2930   | 3050                                 |
| Bucket weight  | kg                | 1591   | 1561   | 1615                                 | 1410   | 1463                                 |
| <b>E</b> Operating height - fully raised w/ spillguard | mm                | 5530   | 5500   | 5500                                 | 5340   | 5340                                 |
| <b>F</b> Hinge pin height - fully raised               | mm                | 4120   | 4120   | 4120                                 | 4120   | 4120                                 |
| <b>G</b> Overall length - bucket level on ground       | mm                | 7890   | 7860   | 7990                                 | 7700   | 7830                                 |
| Dump angle - fully raised                              |                   | 55°  | 55°  | 55°                                  | 55°  | 55°                                  |
| <b>H</b> Dump height - fully raised, 45° dump          | mm                | 2960   | 2980   | 2900                                 | 3090   | 3000                                 |
| <b>J</b> Bucket reach - fully raised, 45° dump         | mm                | 1130   | 1110   | 1210                                 | 980  | 1090                                 |
| <b>K</b> Bucket reach - 2.13m height, 45° dump         | mm                | 1720   | 1700   | 1760                                 | 1630   | 1690                                 |
| Operating load - ISO                                   | kg                | 6148   | 6202   | 6167                                 | 6320   | 6285                                 |
| Maximum material density - ISO                         | kg/m <sup>3</sup> | 1814   | 1957   | 1946                                 | 2403   | 2390                                 |
| <b>Tipping load - ISO</b>                              |                   |  |  |                                      |  |                                      |
| - Straight   | kg                | 14 232   | 14 351   | 14 280                               | 14 596   | 14 526                               |
| - 40° turn   | kg                | 12 297   | 12 405   | 12 333                               | 12 639   | 12 570                               |
| Breakout force w/ tilt cylinder                        | kg                | 15 611   | 16 061   | 14 505                               | 18 479   | 16 480                               |
| <b>Maximum rollback</b>                                |                   |  |  |                                      |  |                                      |
| - Ground   |                   | 41°  | 41°  | 41°                                  | 41°  | 41°                                  |
| - Carry position                                       |                   | 44°  | 44°  | 44°                                  | 44°  | 44°                                  |
| - @ Maximum reach                                      |                   | 54°  | 54°  | 54°                                  | 54°  | 54°                                  |
| - @ Full height  |                   | 59°  | 59°  | 59°                                  | 59°  | 59°                                  |
| <b>L</b> Dig depth                                     | mm                | 75   | 75   | 75                                   | 74   | 74                                   |
| Maximum grading angle w/ bucket - back dragging        |                   | 60°  | 60°  | 61°                                  | 59°  | 59°                                  |
| Loader clearance circle                                | mm                | 13 206   | 13 186   | 13 374                               | 13 100   | 13 280                               |

NOTE: Performance data unit equipped with 23.5R25 XHATL tires, ROPS cab w/ heater and A/C, full counterweight, standard batteries, front and rear fenders, full fuel and 79 kg operator.

# 721E-EXT 821E

## STANDARD EQUIPMENT & OPTIONS

### STANDARD EQUIPMENT

#### Operator's environment

- ROPS cab with heat and A/C
- Articulated power steering with tilt column
- Fully adjustable, suspension seat
- 1-Lever loader control with wrist rest
- Cup holder
- Coat hook
- Storage tray behind seat
- Cooled lunch box
- Single brake pedal
- F/N/R shuttle switch
- External rear view mirrors
- Lock box
- Pressurized air filtering
- Defroster
- Side window, partial/fully open
- Dome light
- Wipers, rear and intermittent front
- Windshield washers, front and rear
- Secondary steering

#### Engine

- Case Family IV 667TA/EED
- Tier III certified
- Selectable work modes
  - Max power - Auto power
  - Standard power - Economy power
- Turbocharger
- Charge air cooling
- Automatic fan belt tensioner
- Integral engine oil cooling
- Fuel filter with water trap
- Dual element air cleaner
- 65 amp alternator

- (2) 700 CCA 12-volt batteries
- Liquid-cooled radiator
- Non spark-arresting muffler
- Mid-mounted cooling module
- Common rail electronic fuel injection
- Hydraulic reversing fan

#### Loader

- Z-bar loader linkage
- Single control for lift and tilt
- Positive hold float
- Automatic return-to-dig
- Automatic height control
- Automatic return-to-travel
- Brake pedal transmission disconnect

#### Drivetrain

- 4-wheel drive
- 4F/3R Selectable autoshift/manual shift transmission
- Electronic Control Module - Programmable, computer controlled proportional shifting with programmable gear selection
- Onboard diagnostics
- Single lever electronic shift control
- F/N/R switch in loader control handle
- Downshift button
- Torque converter
- Outboard planetary axles
- Limited-slip differentials
- Transmission oil cooler
- Brake pedal transmission disconnect
- Hydraulic wet disc brakes
- Spring-applied hydraulic release

- parking brake
- Limp-Home Mode
- Lubed-for-life drive shaft

#### Hydraulics

- Single lever 2-spool loader control valve
- Low-effort steering
- Hydraulic driven fan
- Diagnostic quick couplers
- Ride Control

#### Other

- Electric hood lift
- Front and rear fenders
- Lights
  - Front driving headlights (high/low beam)
  - Front flood
  - Stop/tail lights and backup light
  - Rear flood
- Front and rear turn signal/flash
- Standard counterweight
- Drawbar hitch
- Articulation locking bar
- Lift arm locking bar
- Lift and tie-down points - front/rear
- Backup alarm
- Remote drain points
- RH steps and platform

#### Engine

- Cold weather package
- Heavy-duty batteries

#### Loader

- Hydraulic attachment coupler
- Buckets

#### Hydraulics

- Auxiliary hydraulics
- 3 or 4-spool loader valves with 2 or 3-lever loader control

#### Tires

##### For 721E

- 20.5-25 12 PR L3 bias (rock)
- 20.5 R25 radial (dirt/traction)
- 20.5 R25 radial (rock)

##### For 821E

- 23.5 - 25 BIAS (rock)
- 23.5 R25 RADIAL (dirt/traction)
- 23.5 R25 RADIAL (rock)

#### Other

- Full coverage fenders
- Belly pan
- Tool box
- Full counterweight - Z-Bar

### OPTIONS

#### Operator's compartment

- Radio
- Radio-ready (12 or 24-volt)
- Cab convenience package
- Rotating beacon

Standard and optional equipment shown can vary by country.

#### Worldwide Case Construction Equipment Contact Information

**EUROPE/AFRICA/MIDDLE EAST:**  
Centre D'affaires EGB  
5, Avenue Georges Bataille - BP 40401  
60671 Le Plessis-belleville - FRANCE

**NORTH AMERICA/MEXICO:**  
700 State Street  
Racine, WI 53404 U.S.A.

**LATIN AMERICA:**  
Av. General David Sarnoff 2237  
32210 - 900 Contagem - MG  
Belo Horizonte BRAZIL

**ASIA PACIFIC:**  
Unit 1 - 1 Foundation Place - Prospect  
New South Wales - 2148 AUSTRALIA

**CHINA:**  
No. 29, Industrial Premises, No. 376,  
De Bao Road, Waigaoqiao Ftz, Pudong,  
SHANGHAI, 200131, P.R.C.

**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 reserves the right to modify machine specifications without incurring any obligation relating to such changes.

#### Case Construction Equipment

CNH UK Ltd.  
Armstrong House  
The Finningley Estate  
Hayfield Lane  
Doncaster  
DN9 3XA  
Fax +44 (0)1302 802126

[www.casece.com](http://www.casece.com)

# CASE



Conforms to directive 98/37/CE