



# WHEEL LOADER 921E



Engine Horsepower	221 kW/297 hp
Operating weight (max.)	22 962 kg
Bucket capacity	4.00 - 4.60 m <sup>3</sup>

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

## ERGONOMIC OPERATOR STATION

Longer and wider isolation-mounted E series cab has full height glass for maximum visibility around the machine. The cab door and right hand window can be opened 180° for cross ventilation and numerous air diffusers provide heating and ventilation all around the cab. Fully adjustable seat and steering column and standard single lever loader control ensure optimum comfort for all operators. Ergonomically designed switchgear and central console provide clear information and ease of use.

**Operator comfort. Maximise productivity.**

## ECONOMICAL POWERHOUSE

The 921E is powered by an electronically-controlled, Euro III compliant 11 litre engine offering multiple power curves to boost productivity and ensure optimum economy. Max, standard, economy and auto working modes fine tune the machine to the task, providing power for loading and digging with low fuel consumption for lighter stockpiling duties. Auto mode automatically adjusts engine power to move the maximum amount of material per litre of fuel.

**Power to perform. Low emissions and consumption.**

## EXCELLENT SERVICE ACCESS

All daily checks can be performed from ground level, with fluid sight gauges on all reservoirs. Electrically raised single piece canopy provides unrivalled access for service and maintenance. Revised cooling pack has separate access panel and swing-out air conditioning condenser for easy cleaning. Extended service intervals and ease of maintenance result in lower ownership costs and improved productivity.

**Reduced downtime.**

**Cost effective operation.**



## ENHANCED VISIBILITY

Redesigned front wheel arches, increased glass area in the cab and a contoured single-piece engine cover provide excellent levels of visibility all around the working area, improving safety on site. Engine air pre-cleaner now placed in line with exhaust stack for maximum rear visibility. Full height glazing to the front and sides ensures a good view to the wheels and bucket corners.

**Safe operation. Increased production.**

## ESSENTIAL CONTROL

Ride Control reduces shock loading in the loader arm and bounce in the cab when travelling. Increases operating speed and reduces cycle times for load and carry operations. Auto mode automatically engages Ride Control at speeds over 5 km/h to maintain maximum load retention.

**Faster operation. Total performance.**

## EXTRA BREAKOUT

Robust Z-bar loader linkage design and pressure-compensating hydraulics deliver superior breakout forces and lift capacity, boosting productivity and reducing cycle times. Single loader control lever incorporates forward/reverse and transmission downshift buttons, putting the controls at the operator's fingertips at all times.

**Optimum output. Complete control.**



## AWARDED

- Potencia 2007 award, in the wheeled construction equipment category
- Diesel Progress magazine, in cooperation with ZF, honored Case with the First Excellence in Equipment Engineering award, in the wheel loader category for the 921E

## ENGINE



The 921E is powered by a Tier III compliant 11 litre Cummins engine, offering a maximum output of 297 hp (221 kW) at 1800 rpm. Multiple power curves controlled by a working mode system offer a standard net power rating of 274 hp (204 kW) and an economy mode output of 229 hp (171 kW) at only 1400 rpm. Auto mode automatically adjusts the engine output to meet the needs of the machine in varied operating conditions. Electronic fuel injection with high injection pressures allows cleaner, more efficient burning, for increased output and reduced emissions and fuel consumption.

## FRONT VISIBILITY



The 921E has an ergonomically designed cab that is far larger than on its predecessor. Pillarless top to bottom glazing to the front and both sides of the cab offers an excellent view of the bucket corners or attachment.

Redesigned front fenders ensure that the operator has a clear view of the front wheels, aiding manoeuvrability and making the machine easier to place accurately, boosting productivity. Powerful windscreen wipers keep the main window clear in all weathers and the new fenders prevent muck from the wheels being thrown onto the windows.

The 921E has a central control console that is easy to read and its compact dimensions ensure a clear view to the lift arms and bucket link, leading to safe operation in all site conditions.

## REAR VISIBILITY



At the rear of the engine air pre-cleaner and exhaust stack are positioned in line in the centre of the engine canopy to increase visibility over the back of the machine. The 921E has a contoured one-piece engine cover that drops away from the line of sight to give an excellent view behind the operator. Slim cab pillars provide high levels of visibility to the rear three-quarters of the 921E. This is essential for a wheeled loader operator in a stocking and loading operation, promoting safety in all operating conditions.

A rear windscreen wiper is standard, ensuring that the view to the rear of the machine stays clear whatever the weather.

## OPERATOR'S CAB

The Case 921E uses the latest E series cab, which is longer and wider than on previous machines. This provides an exceptional working space, with a flat floor for ease of cleaning. Adjustable steering and a fully adjustable driver's seat ensure that every operator can stay comfortable throughout the working shift.

The cab is among the quietest in the industry and features floor to roof glazing, for maximum visibility all around the machine. Easy to read analogue gauges combined with a digital display to provide all necessary information in a clear dash console. A contoured console to the operator's right houses all switches and the heating and ventilation controls.



## RIDE CONTROL



The ergonomically designed Case wheel loader can be specified with Ride Control, a system that allows the lift arms to float when the machine is moving. This reduces shock loadings on the operator and the machine, reducing fatigue and prolonging component life. Ride Control allows the operator to drive at higher speeds during load and carry operations, offering excellent load retention of material, for maximum productivity. The system has three operating modes, fully on, off, to allow full hydraulic power during loading and digging operations, and an automatic setting, that engages Ride Control when the machine accelerates above 5 km/h.

## DRIVETRAIN



The 921E uses a torque sensing autoshift transmission, offering manual or fully automatic control. Both axles incorporate limited slip differentials for maximum traction when digging and loading. Axles feature optional oil coolers with continuous flow and filtration. Disc brakes are oil cooled for maximum retardation and reduced heat build-up, prolonging brake component life and reducing operating costs. The machine's low effort servo lever incorporates a quick shuttle switch for rapid directional changes while working.

## SERVICE AND MAINTENANCE



A large, single-piece electric engine canopy offers unparalleled service access to the engine and cooling pack. All daily checks can be carried out from ground level, thanks to sight gauges on all fluid reservoirs.

A hydraulically driven fan, with swing out fan guard, offers a reversing function to blow dust and debris from the cooling pack. Thanks to a swing out air conditioning condenser all coolers can be easily accessed for cleaning and visual checks. Centrally located greasing points provide easy access and bucket pin seals prevent debris infiltration, prolonging component life. The Case 921E is fully compatible with the Case EST electronic service tool, providing rapid diagnostics and fault checking to minimise downtime. All electronics are centrally located within the cab to ensure that they remain clean and out of harm's way.







# SPECIFICATIONS

## ENGINE

Model Case \_\_\_\_\_ Cummins QSM 11, Tier III certified  
 Type \_\_\_\_\_ 6 cyl, turbocharged and air-to-air cooled  
 Bore/Stroke \_\_\_\_\_ 125 X 147 mm  
 Displacement \_\_\_\_\_ 10.8 l  
 Fuel injection \_\_\_\_\_ Electronic  
 Fuel filter \_\_\_\_\_ Replaceable, full flow spin-on cartridge  
 Fuel cooler \_\_\_\_\_  
 Air filter \_\_\_\_\_ Dry type element w/warning restriction indicator  
 Pump operating angle ratings \_\_\_\_\_  
 Side-to-side \_\_\_\_\_ Rated 45°  
 Fore and aft \_\_\_\_\_ Rated 45°  
 Oil filtration \_\_\_\_\_ Replaceable, full flow spin-on cartridge  
 Engine speeds - Rated speed, full load \_\_\_\_\_ 2100 rpm  
 Horsepower - Peak \_\_\_\_\_  
 Max Power \_\_\_\_\_  
 Gross \_\_\_\_\_ 320 hp (239 kW) @ 1800 rpm  
 Net \_\_\_\_\_ 297 hp (221 kW) @ 1800 rpm  
 Standard Power \_\_\_\_\_  
 Gross \_\_\_\_\_ 297 hp (221 kW) @ 1800 rpm  
 Net \_\_\_\_\_ 274 hp (204 kW) @ 1800 rpm  
 Economy Power \_\_\_\_\_  
 Gross \_\_\_\_\_ 241 hp (179 kW) @ 1400 rpm  
 Net \_\_\_\_\_ 229 hp (171 kW) @ 1400 rpm

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

Torque - Peak \_\_\_\_\_  
 Max Power \_\_\_\_\_  
 Gross \_\_\_\_\_ 1478 Nm@ 1000 rpm  
 Net \_\_\_\_\_ 1446 Nm@ 1000 rpm  
 Standard Power \_\_\_\_\_  
 Gross \_\_\_\_\_ 1373 Nm@ 900 rpm  
 Net \_\_\_\_\_ 1349 Nm@ 900 rpm  
 Economy Power \_\_\_\_\_  
 Gross \_\_\_\_\_ 1373 Nm@ 1000 rpm  
 Net \_\_\_\_\_ 1349 Nm@ 1000 rpm  
 Torque rise \_\_\_\_\_  
 Standard power \_\_\_\_\_ 50.1%

## 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 to all four wheels with accumulator for each axle.  
 Parking brakes \_\_\_\_\_  
 Spring-applied hydraulic release disc on transmission output shaft  
 Travel speeds - km/h with 26.5R25XHA Tires \_\_\_\_\_

	Forward	Reverse
1st	8.0	8.0
2nd	13.2	14.1
3rd	25.8	25.8
4th	37.4	NA

NOTE: Travel speeds at full engine throttle.

## ELECTRICAL

Voltage \_\_\_\_\_ 24 Volts, negative ground  
 Alternator \_\_\_\_\_ 95 amp  
 Batteries \_\_\_\_\_ (2) CCA 900 - 12V 750 Amp

## HYDRAULICS

Pump (steering/implement) \_\_\_\_\_  
 Closed centered pressure/flow compensated  
 Variable displacement \_\_\_\_\_ 324.2 l/min @ 2000 rpm  
 @ 24 821 kPa  
 Implement pump Closed centered pressure/flow compensated  
 Filtration \_\_\_\_\_  
 10-micron, full flow replaceable cartridges on return line,  
 condition indicator light for filter.

## CYCLE TIME

Raise w/rated bucket load \_\_\_\_\_ 6.2 sec  
 Dump w/rated bucket load \_\_\_\_\_ 3.6 sec  
 Lower "empty" \_\_\_\_\_  
 Power down \_\_\_\_\_ 3.0 sec  
 Float down \_\_\_\_\_ 1.2 sec

## SERVICE CAPACITIES

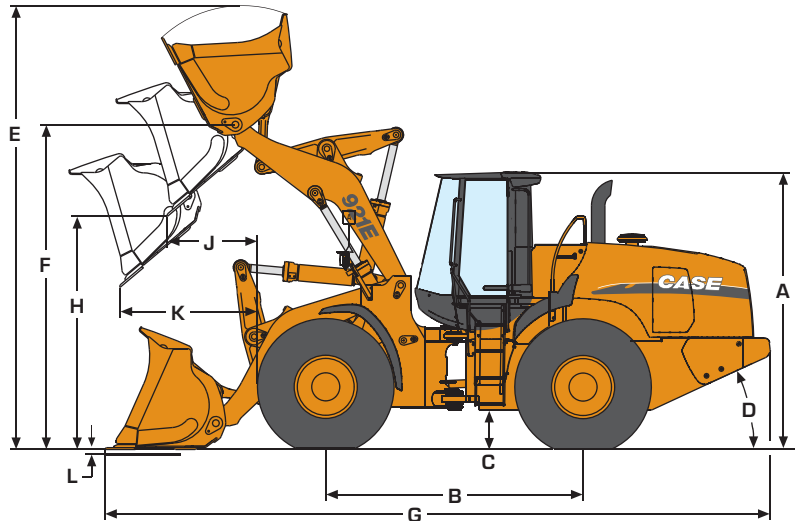
Fuel tank \_\_\_\_\_ 394 l  
 Hydraulic system \_\_\_\_\_  
 Total \_\_\_\_\_ 242 l  
 Reservoir \_\_\_\_\_ 130 l  
 Transmission \_\_\_\_\_  
 Service with filter \_\_\_\_\_ 39.7 l  
 Front and rear axle \_\_\_\_\_  
 Front axle \_\_\_\_\_ 47.3 l  
 Rear axle \_\_\_\_\_ 47.3 l  
 Engine oil with filter \_\_\_\_\_ 36.9 l  
 Cooling system \_\_\_\_\_ 56.8 l

## OPERATING WEIGHTS

Unit equipped with ROPS cab with heater and A/C,  
 counterweight, 26.5R25XHA Tires, 4.6 m<sup>3</sup> bucket, full fuel,  
 79 kg operator \_\_\_\_\_ 23 042 kg



# GENERAL DIMENSIONS 921E



## DIMENSIONS

<b>A</b>	Height to top of ROPS cab	mm	3700
<b>B</b>	Wheelbase	mm	3400
<b>C</b>	Ground clearance	mm	489
<b>D</b>	Angle of departure		34°
<b>Width</b>			
	- overall* w/o bucket	mm	3000
	- centerline tread	mm	2225
	Turning radius* - outside	mm	6870
<b>Turning angle</b>			
	- from center		40°
	- total angle		80°
	Rear axle oscillation (total)		24°

NOTE: \*Dimensions taken with 26.5-25XHAT tires.

## PERFORMANCE DATA

### 921E Z-Bar\*

		4.0 m <sup>3</sup> Bucket w/Bolt-on Edge	4.0 m <sup>3</sup> Bucket w/Teeth & segments	4.60 m <sup>3</sup> Bucket w/Bolt-on Edge	4.60 m <sup>3</sup> Bucket w/Teeth & segments
SAE bucket capacity - heaped	m <sup>3</sup>	4.06	3.97	4.62	4.51
Bucket width - outside	mm	3021	3047	3071	2198
Bucket weight	kg	2146	2270	2270	2399
<b>E</b> Operating height - fully raised w/spillguard	mm	5833	5833	5893	5893
<b>F</b> Hinge pin height - fully raised	mm	4278	4278	4278	4278
<b>G</b> Overall length - bucket level on ground	mm	8756	8896	8815	8955
Dump angle - fully raised		55°	55°	55°	55°
<b>H</b> Dump height - fully raised, 45° dump	mm	3110	3012	3067	2969
<b>J</b> Bucket reach - fully raised, 45° dump	mm	1264	1341	1286	1363
<b>K</b> Bucket reach - 2.13m height, 45° dump	mm	1900	1935	1904	1937
Operating load - SAE	kg	8436	8379	8325	8261
Maximum material density - SAE	t/m <sup>3</sup>	2.08	2.11	1.80	1.83
Tipping load - SAE					
- straight	kg	19604	19500	19368	19249
- 40° turn	kg	16871	16758	16649	16522
Breakout force w/ tilt cylinder	kg	20773	18819	19910	18075
Maximum rollback					
- Ground		41°	41°	41°	41°
- Carry position		43°	43°	43°	43°
- @ Maximum reach		67°	67°	67°	67°
- @ full height		63°	63°	63°	63°
<b>L</b> Dig depth	mm	102	127	121	146
Maximum grading angle w/ bucket - back dragging		62°	62°	62°	62°
Loader clearance circle (to front corner of bucket)	mm	13570	13682	13653	13857
Unit Operating mass	kg	22918	23042	23042	23171

NOTE: Performance data unit equipped with 26.5 - 25XHAT tires, ROPS cab w/ heater and A/C, standard counterweight, standard batteries, wide front and rear fenders, full fuel and 79 kg operator. Specifications per SAE J732, J1234, J695, J742, and J818.

# 921E

## STANDARD EQUIPMENT & OPTIONS

### STANDARD EQUIPMENT

#### Operator environment

- ROPS cab w/heat
- Key start
- Articulated power steering w/tilt column
- Fully adjustable, suspension seat
- Foot throttle
- Single lever 2-spool loader control w/wrist rest
- Cup holder
- Coat hook
- (1) Interior rearview mirror
- 2 in (51 mm) retractable seat belt
- Storage tray behind seat
- Cooled lunch box
- Single brake pedal
- F/N/R shuttle switch
- External rear view mirrors
- Lock box
- Pressurized air filtering
- Anti-glare window strip
- Defroster
- Side window, partial/fully open
- Dome light
- Wipers, rear and intermittent front
- Windshield washers, front and rear
- Rubber floor mat
- Sunscreen

#### Engine

- Cummins QSM 11
- Tier III certified
- Selectable work modes
- Max power
- Auto power
- Standard power

- Economy power
- Turbocharger
- Charge air cooling
- Integral engine oil cooling
- Fuel filter w/water trap
- Dual element air cleaner
- 95 amp alternator
- (2) 900 CCA, 12-volt batteries
- Liquid-cooled radiator
- Non spark-arresting muffler
- **Unit injector**

#### 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
- Bucket position indicator on bucket

#### Drivetrain

- 4-wheel drive
- Axle coolers
- 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

#### Other

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

#### Engine

- Cold weather package
- Heavy-duty batteries

#### Loader

- Hydraulic attachment coupler
- Attachment auxiliary hydraulics
- Buckets

#### Hydraulics

- Auxiliary hydraulics
- Ride Control
- Secondary steering
- 3 or 4-spool loader valves with 2 or 3-lever loader control
- Hydraulic temperature controlled reversing fan

#### Tires

- 26.5 x 25 L3 Bias
- 26.5 R 25 L2 Radial
- 26.5 R 25 L3 Radial

### OPTIONS

#### Operator compartment

- Cab air-conditioning w/ heater
- 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

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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.



The call is free from a land line. Check in advance with your Mobile Operator if you will be charged.

**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.



Conforms to directive 98/37/CE

#### CASE Construction Equipment

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