Tier 2
EU Stage II

Faster, fuel efficient

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Experts for the real world
Since 1842
FAST, PRODUCTIVE, FUEL EFFICIENT

BE READY FOR THE BEST:
- Advanced Engine Technology
- High Efficiency Transmission
- High Productivity Differential and Axles
- Low Maintenance Cooling Design
- Premium Ergonomics
NEW GENERATION ENGINE:
The extremely compact second generation common rail engine delivers top performance in load response, max torque, power and fuel economy.

The combustion is optimized for maximum efficiency, at high temperatures using 100% fresh, cool air, as the air intake is separated from the exhaust.

The turbocharged engine with an Air-to-Air intercooler relies on a 3-step injection technology to maximize responsiveness and fuel efficiency with reduced engine noise and vibrations.

4 working modes (max, economy, normal and auto) allow you to maximize productivity or fuel efficiency according to your needs.
10% LOWER FUEL CONSUMPTION
The high combustion temperature result in optimum engine performance. The second generation common rail engine ensures better engine control at all rpm. The multiple injection technology delivers optimum combustion control.

OUTSTANDING FLAT TORQUE
The second generation common rail engine ensures better engine control at all rpm and the 100% fresh air input further improves engine output. The multiple injection technology ensures optimum combustion control, while the 1600 bar injection delivers best-in-class torque performance.

LOWER MAINTENANCE COSTS
The combustion chamber and high pressure injection are optimized to reduce oil dilution. The engine only breathes fresh air, so there is no oil contamination. It also has better fuel compatibility because there is no exhaust gas recirculation and it doesn’t need a specific oil because with “SCR only” there is no Diesel Particulate Filter.
NEW HEAVY-DUTY AXLES
The new heavy-duty axles are tougher, bigger and easier to service with the 3-piece housing design. Wet multiple disc brakes made of resistant sinter bronze are located in each wheel hub.

FRONT DIFFERENTIAL WITH 100% AUTO-LOCK (921F)
With 100% Auto-lock, 100% of the available torque goes to the wheel with adherence. There is no slippage between the wheels and no friction in the differential. The Auto-lock is activated automatically when a front wheel is about to slip, or you can easily do it manually with your left foot.

To reduce your initial investment: 921F is also available without 100% auto-lock, suitable for jobs on dry, hard, flat surfaces
With L5 tyres, needed for work in very abrasive environments, we recommend heavy-duty axles. Solid tires can be retrofitted

MORE PRODUCTIVITY
100% of available torque is transmitted to the wheels, delivering optimum pushing power.

GREATER RETURN ON INVESTMENT
Tyre wear is reduced by 20-30% because there is no slippage between the wheels, fuel consumption is lower because there is no friction in the differential, less maintenance is needed because there are fewer moving components with open differentials. The result: better resale value.

ALWAYS RELIABLE
The heavy duty axles and open differentials result in superior reliability.
LOW MAINTENANCE
COOLING DESIGN

BETTER WEIGHT DISTRIBUTION WITH THE REAR MOUNTED ENGINE

THE COOLING CUBE
The unique design, with the five radiators mounted to form a cube instead of overlapping, ensures that each radiator receives fresh air and that clean air enters from the sides and the top, maintaining constant fluid temperatures. The high efficiency of the cooling system lengthens the life of the coolant to 1500 hours. The standard reversible fan can be activated from the cab and is very effective thanks to the cooling cube. The engine is mounted at the rear of the machine. This, together with the lower fan speed (just 1200 rpm), results in lower noise and vibration levels in the cab.

DESIGNED FOR DUSTY ENVIRONMENT
The cooling system is mounted behind the cab, far from the rear of the machine and from the ground - away from the dust.
LESS MAINTENANCE

The radiators are easy to clean with the reversible fan, which is activated from the cab. The cube design of the cooling system results in more effective cleaning of the radiators, and additional cleaning can be easily done manually, with separate access to each radiator. The efficient cube design also results in a longer life for the cooling fluid, which lasts 500 hours more, so that change intervals are 1500 hours.

INCREASED RELIABILITY

The constant temperature of the fluid maximises its cooling performance and protects the axles, resulting in greater reliability. This is further enhanced by the easy maintenance and longer service intervals. The better weight distribution means that a smaller counterweight or dead weight is needed, which reduces stress on the axles and the brakes.

UPPER CLASS BUCKET PAYLOAD

Don’t be surprised to notice our wheel loader has the same payload as a competitive model of the upper class of weight: this happens because the rear engine position allows to reduce significantly the amount of dead weight in the machine.
PREMIUM ERGONOMICS

PROTECTED CAB
Our reinforced cab guarantees protection against roll over (ROPS) and falling objects (FOPS)

LOW OPERATOR VIBRATIONS
Engine noise and vibrations are reduced by 3-step injection: pre-, main- and post-injection. To further increase the operator comfort the rear mounted engine is distant from the cab and standard the seat air suspended. Heated seat is optional.

ALL CONTROLS AT YOUR FINGERTIPS

OUTSTANDING ALL-ROUND VISIBILITY
You’ll feel more confident and work faster with the great all-round visibility provided by the very low shape of the curved rear hood and the ample glazed surfaces. 17 air vents ensure your comfort and prevent the windshields from steaming up.

HYDRAULIC FUNCTIONS THAT ADD TO YOUR COMFORT
To maximise your focus on the job and reduce your stress levels, you can activate the following functions from the ergonomically positioned control panel under your right hand:
- Auto-shift: ensures the machine always operates in the most suitable gear according to speed, kick down and engine braking
- Reverse button on the joystick: activates front, neutral or reverse
- Return to dig: brings back the bucket in the right position for loading again
- Return to travel: lowers the boom to carry position, which can be adjusted
- Auto-lift: lifts the boom to the max height you have set
- Auto-Ride Control: reduces loader arm bounce during travel, maintaining maximum material retention. It activates from 8 km/h
- Auto-diff lock: The 100% differential lock can be activated manually with your left foot or automatically for greater focus on the job
- Auxiliary circuit lever: For hydraulic attachments such as high tip bucket, you can order the optional auxiliary circuit controlled by a lever next to the joystick for your ease of use.

JOYSTICK STEERING
Long days of repetitive cycles go faster with joystick steering (optional) because your sitting position is better. The steering wheel is maintained for a better handling. You will appreciate it during transfers on uneven terrains, on a descending slope and in case of emergency

LEVERS CONTROLS
Depending on your habits you may prefer the optional 2-lever control to the standard joystick control. The optional 3rd lever controls the attachment auxiliary circuit. It can also be retrofitted as a kit.
FAST AND EASY MAINTENANCE

ONE-PIECE ELECTRIC HOOD
The positioning of the engine at the rear and the easy-to-open electric hood ensure fast access to the service points. Jumper cables are available as standard for jump starting the engine if the battery is low.

GROUND LEVEL MAINTENANCE DESIGN
Don’t be surprised if you don’t see any safety handrails around the hood or steps behind the rear wheels, all service points are easily accessible at ground level. You can do a fast visual check of the hydraulic and transmission oil levels. The three drains are grouped together on the left side, below the hood and battery switches, so that fluids are easy and quick to replace.

LESS MAINTENANCE, MORE UPTIME
You can maximise the working time with these wheel loaders, with the long service intervals of 1500 hours for the transmission oil and filter, the axle oil and filter, and the coolant. The positioning of the cooling system behind the cab means that it needs less cleaning, and the cooling cube design enables you to clean very efficiently with the reversible fan as well as manually.
Both pumps and engine distributions rely on one belt only for faster maintenance.

GREATER SAFETY
All the main service points are easily accessible from the ground, so you can carry out your daily maintenance safely and efficiently.
THE DNA OF YOUR
921F

PRODUCTIVITY (50-meter distance cycle)
Considering: density: 1.8 t/m³, fill factor: 100%, 52 cycles/hour and each hour includes a 5-minute break 210 m³/h or 375 t/h
52 loading cycles/h with standard bucket 4.0 m³ or 7.2 ton

ENGINE TIER 2
compliant with Tier 2 (EU stage II regulations)
FPT turbocharged engine F4HFA613D with:
- 100% fresh air combustion
- Air to Air intercooler
- Multiple injections similar to multi-jet automotive technology to achieve best in class load response, max torque and power with the minimum fuel consumption.
6 cylinders - 6.7 liters
Max power SAE J1995 190kW / 255 hp @1800 rpm
Maximum torque SAE J1349 1300 Nm @1300 rpm

TRANSMISSION
All-wheel drive with planetary axles
kick-down function
4-speed torque converter
4-speed auto Powershift switchable to manual shifting
ZF , switchable to manual shifting
forward speeds 7-12-23-36 Km/h
reverse speeds 7-13-24 Km/h
Adjustable transmission declutch

AXLES AND DIFFERENTIAL
Front and rear ZF Heavy Duty axles with 100% front auto-lock differential.
(100% of available torque is always guaranteed on the front wheels)
Rear axle total oscillation 24°

TYRES
Tyres 23.5R25

BRAKES
Service brake Maintenance free, self-adjusting wet 4-wheel disc brakes
Area 0.47 m²/hub
Parking brake Disc brake on transmission activated from the cab cluster
Area 82 cm²

HYDRAULIC
Valves Rexroth Closed-center, Load sensing hydraulic system.
Main valve with 3 sections
Steering The steering orbitrol is hydraulically actuated with priority valve
Type of pump Tandem Variable displacement pump
(282 l/min @2000 rpm)
Automatic hydraulic functions
- Bucket Return-to-dig
- Boom Return-to-travel
- Auto.lift (to adjustableheight)
Control type Pilot control with single joystick or two levers

CAPACITIES
Fuel tank 288 usable litres
Cooling system 30 litres
Engine oil 15 litres
Hydraulic oil Tank: 110 litres, total system: 200 litres
Transmission oil 34 litres

CAB AND CONTROLS
For you safety the cab complies to:
protection against falling objects (FOPS) ISO EN3449
protection against roll over (ROPS) ISO EN13510

NOISE AND VIBRATION
Driving noise in dB (A) 82 to SAE J88 @ 15 meters
Interior noise 72 LpA as per ISO6395/6396/3744
Exterior noise 71 dB(A) at 15 meters as per SAE J88 SEP80
103 LwA according to ISO6395/6396/3744
Switchable reverse gear alarm
Vibrations air-cushioned seat MSG 95A/732 average 1.4m/s² as per ISO/TR 25398:2006

ELECTRICAL SYSTEM
24V. Batteries 2 x 12V.
Alternator 65A
### GENERAL DIMENSIONS

![Diagram of loader](image)

### LOADER SPEED

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raising time (loaded)</td>
<td>6.2 sec</td>
</tr>
<tr>
<td>Dump time (loaded)</td>
<td>1.4 sec</td>
</tr>
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<td>Lowering time (empty, power down)</td>
<td>3.8 sec</td>
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<tr>
<td>Lowering time (empty, float down)</td>
<td>3.1 sec</td>
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### SPECIFICATIONS

#### GENERAL DIMENSIONS

- **Loader**: CASE 921F Z-Bar Long Reach
- **Bucket volume (heaped)**: 3.6 m³
- **Bucket Payload**: 7123 kg
- **30°**: 3.34 m
- **3.45 m**
- **Overall length**: 6.45 m
- **Overall length without bucket**: 5.85 m
- **Turning radius to front corner of the bucket**: 13.34 m

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#### Z-BAR

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<td>3.63</td>
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<tr>
<td>Bucket Payload</td>
<td>7123</td>
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<tr>
<td>Maximum material density</td>
<td>2.0</td>
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<tr>
<td>Bucket outside width</td>
<td>3.03</td>
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<tr>
<td>Bucket weight</td>
<td>1783</td>
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<tr>
<td>Tipping load - straight</td>
<td>16579</td>
<td>16820</td>
<td>13258</td>
<td>13448</td>
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<tr>
<td>Tipping load - Articulated at 40°</td>
<td>14245</td>
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<td>Breakout force</td>
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<td>Lift capacity from ground</td>
<td>21148</td>
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<td>16685</td>
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<tr>
<td>Dump height at 45° at full height</td>
<td>2.9</td>
<td>2.81</td>
<td>3.34</td>
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<tr>
<td>Hinge pin height</td>
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<tr>
<td>Bucket reach at full height</td>
<td>1.19</td>
<td>1.30</td>
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<tr>
<td>Dig depth</td>
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<td>Overall length with bucket on the ground</td>
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<td>Overall length without bucket</td>
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<tr>
<td>Turning radius to front corner of the bucket</td>
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<td>Bucket rollback in carry position</td>
<td>44</td>
<td>44</td>
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<td>Dump angle at full height</td>
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<tr>
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Note: bucket specification can slightly differ according to plant source. More bucket choice is available, please contact your local dealer.
PARTS AND SERVICE

Wide network of customer support across the world.
No matter where you work, we’re here to support and protect your investment and exceed your expectations. You can count on Case and your Case dealer for full-service solutions—productive equipment, expert advice, flexible financing, genuine Case parts and fast service. We’re here to provide you with the ultimate ownership experience. To locate a Case dealer or learn more about Case equipment or customer service, go to www.casece.com

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