



Cat[®] 814

Wheel Dozer

Cat[®] wheel dozers combine the power of a track dozer with the mobility of a wheeled machine to deliver high production at low operating costs in a variety of applications — from surface mining cleanup to coal stock piling, road maintenance to reclamation.

Unmatched Durability

- The full box-section rear frame resists torsional shock and twisting forces.
- Solid through-width push beams transfer and absorb stresses through a larger portion of the frame.
- Achieve longer component life with increased size of upper hitch pin, frame plate, and bearing.
- Optimized axle mounting results in increased structural integrity.
- Heavy-duty steering cylinder mounts efficiently transmit steering loads into the frame.
- Robust structures withstand the toughest conditions and multiple life cycles to improve your bottom line.
- Resilient, durable blades are designed with excellent dozing and rolling characteristics.

Optimum Efficiency

- The Cat C7.1 engine is designed for maximum fuel efficiency and increased power density.
- New variable displacement load-sensing implement and steering pumps deliver on-demand hydraulic flow, resulting in improved fuel efficiency.
- Avoid unnecessary idling with Engine Idle Shutdown and Auto Idle Kickdown.
- Deep system integration among engine and emission, power train, hydraulic, and cooling systems results in lower fuel consumption on average compared to the previous model.
- Innovative systems effectively lower the average working engine speed and reduce overall system heat loads for improved performance and fuel efficiency.
- Best-in-class Cat Planetary Powershift Transmission features Advanced Productivity Electronic Control Strategy (APECS) controls for greater momentum on grades and increased fuel savings by carrying that momentum through the shift points.
- Optional front and rear LED lighting system provides excellent workspace visibility.
- Equipped for optional object detection to warn operators about potential hazards within the immediate vicinity of the machine.

Increased Safety

- The standard rear vision camera provides excellent workspace visibility.
- Standard Cat Vision and optional heated mirrors increase awareness around the machine for safer operation.
- Cab-mounted LED beacons provide warning for others near the machine.
- Railings, ladders, and nonslip surfaces enhance technician and operator safety.
- Platform outside of the cab allows the operator to easily maintain three points of contact with the machine.

Innovative Technology

- Integrated electronics provide flexible levels of information to both the site and the operator.
- The touchscreen information display gives operators critical information when they need it.
- Enhanced user interface allows for intuitive operation and easy navigation.
- Stay informed about machine systems and diagnostic codes to maximize uptime and reduce service time.
- Cat Product Link[™] remote monitoring allows for remote access to information through the easy-to-use VisionLink[®] interface.
- Vital Information Management System (VIMS[™]) gives access to a wide range of sensor information and enhanced machine data to resolve problems before machine failure.



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Enhanced Operator Comfort

- Steering and Transmission Integrated Control System (STIC™) combines directional selection, gear selection, and steering into a single lever, maximizing responsiveness and control while reducing operator fatigue.
- Experience reduced vibrations with isolated cab mounts and seat-mounted implement and steering controls.
- Cat Premium Plus seat improves operator comfort by having power lumbar and back bolster adjustment, ride stiffness adjustment and dynamic dampening, forced air heating and cooling, and a leather finish.
- The ergonomic placement of controls and easy-to-operate finger-controlled gear selection offer additional comfort.
- Cab is pressurized with filtered air and automatic temperature controls.
- Reduced interior sound levels keep operators comfortable throughout their entire shift.

Improved Sustainability

- Advanced engine idle management helps reduce fuel costs and component wear when machine is not in use.
- Generate less waste with maintenance-free batteries.
- Maximize machine life and lower operating costs with Caterpillar Reman and Certified Rebuild programs, which use reused or remanufactured components for 40 to 70 percent cost savings.
- Retrofit packages from Caterpillar deliver new features to older machines to get the most from your investment.
- Standard high-speed oil changes are fast, easy, and secure.

Simplified Maintenance

- Intuitive design features make maintenance safe and convenient.
- Features ground level or platform access to easily reach daily service points.
- Swing-out doors on either side of the engine compartment provide easy access to critical daily service checks.
- Hydraulic oil cooler, air conditioner condenser, and fuel cooler are grouped together for easy access.
- Sight gauges offer quick visual inspection to minimize fluid contamination.
- Ecology drains prevent spills and allow for easier service.

Purpose Built Specialty Arrangements

- Available in wood chip arrangement.
- Cat wood chip scoops have the unique capability of maximizing your production by both dozing and carrying a load with each pass.
- A purpose built hydraulic system, optimized for use with this work tool, maximizes machine productivity and efficiency.
- Lift cylinder provides hydraulic lift capacity matched to the demands of the application.
- Equipped with automatic reversing fan with manual activation capability for easy cleanout and prevention of wood chip buildup.
- Equipped with pressurized engine compartment to prevent wood chip ingestion through hood openings.
- Extended top guard for increased capacity for wood chip scoops.
- Higher ground pressure decreases risk of fires and maximizes use of storage space.
- Less damage to wood chips due to rubber tires.
- High ground speed provides ability to manage multiple piles.
- Scoop design allows load and carry function for mixing.
- Lift and tip-out design makes stockpiling operations easy.
- Scoop tilt control is standard to maximize worksite efficiency.

Standard and Optional Equipment

Standard and optional equipment may vary. Consult your Cat dealer for details.

| | Standard | Optional | | Standard | Optional |
|--|----------|----------|---|----------|----------|
| ELECTRICAL | | | SAFETY CONTINUED | | |
| Lights, directional (rear) | ✓ | | Cat Detect: object detection (ready) | ✓ | |
| Lighting system (front and rear) | ✓ | | Emergency platform egress | ✓ | |
| Lighting System, LED | | ✓ | Lights, warning switched (LED strobe) | ✓ | |
| Starter, electric | ✓ | | Mirror, internal (panoramic) | ✓ | |
| OPERATOR ENVIRONMENT | | | Mirrors, rearview (externally mounted) | ✓ | |
| Hydraulic controls, seat mounted | ✓ | | Seat belt with minder, retractable, 76 mm (3 in) wide | ✓ | |
| Radio, AM/FM/AUX/USB/Bluetooth | | ✓ | STIC control system with lockout | ✓ | |
| Radio ready for entertainment: antenna, speakers, converter (12V, 10-15 amp) | ✓ | | SERVICE | | |
| Seat, Premium plus containing forced air heating and cooling, two-way thigh adjustment, power lumbar and back bolster adjustment, ride stiffness adjustment, dynamic end dampening, and leather finish | ✓ | | Doors, service access (locking) | ✓ | |
| Rubber mounted, tinted glass | ✓ | | Dual engine precleaner | | ✓ |
| POWER TRAIN | | | Ecology drains for engine, radiator, transmission, hydraulic tank | ✓ | |
| Advanced Productivity Electronic Control System (APECS) | ✓ | | Engine, crankcase, 500 hour interval with CJ-4 oil | ✓ | |
| Brakes, full hydraulic, enclosed, wet single disc service brakes | ✓ | | Engine precleaner | ✓ | |
| Engine driven cooling fan – suction | ✓ | | Fast fill fuel | | ✓ |
| Heater, engine coolant, 120V | | ✓ | Fire suppression ready | ✓ | |
| Heater, engine coolant, 240V | | ✓ | Ground level engine shutoff | ✓ | |
| No-spin rear axle | | ✓ | Ground level lockable master disconnect switch | ✓ | |
| Radiator, unit core | ✓ | | Oil change system, high speed | ✓ | |
| COLD WEATHER | | | Oil sampling valves | ✓ | |
| Antifreeze, -50° C (-58° F) | | ✓ | Starting receptacle for emergency start | ✓ | |
| Antifreeze, premixed 50% concentration extended life (-34° C/-29° F) | ✓ | | Total hydraulic filtration system | ✓ | |
| Starting aid (ether) | ✓ | | SOUND | | |
| EFFICIENCY | | | Sound suppression | | ✓ |
| Steering, load sensing | ✓ | | OTHER | | |
| Torque converter | ✓ | | Counterweight (front) | | ✓ |
| SAFETY | | | DEF tank fill gauge | ✓ | |
| Alarm, back-up | ✓ | | Sound suppression (required for Brazil) | | ✓ |
| Camera, rear vision | ✓ | | OTHER OPTIONAL ARRANGEMENTS | | |
| | | | Scoop arrangement | | ✓ |

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Technical Specifications

Engine

| | | |
|-----------------------------------|--|------------|
| Engine Model | C7.1 | |
| Emissions | U.S. EPA Tier 4 Final/EU Stage V | |
| Rated Speed | 2,200 rpm | |
| Net Power (SAE J1349:2011) | 186 kW | 249 hp |
| Net Power (ISO 9249:2007) | 186 kW | 249 hp |
| Gross Power (SAE J1995:2014) | 212 kW | 284 hp |
| Engine Power (ISO 14396:2002) | 205 kW | 275 hp |
| Peak Torque @ 1400 rpm | 1223 N•m | 902 lbf-ft |
| Torque Rise | 52% | |
| Emissions | Brazil MAR-1 and China Nonroad Stage III, equivalent to U.S. EPA Tier 3/EU Stage IIIA | |
| Rated Speed | 2,200 rpm | |
| Net Power (SAE J1349:2011) | 186 kW | 249 hp |
| Net Power (ISO 9249:2007) | 186 kW | 249 hp |
| Gross Power (SAE J1995:2014) | 213 kW | 286 hp |
| Engine Power (ISO 14396:2002) | 205 kW | 275 hp |
| Peak Torque @ 1400 rpm | 1016 N•m | 749 lbf-ft |
| Torque Rise | 26% | |
| Bore | 105 mm | 4.1 in |
| Stroke | 135 mm | 5.3 in |
| Displacement | 7.01 L | 427.8 in³ |
| High Idle Speed | 2,270 rpm | |
| Low Idle Speed | 800 rpm | |
| Maximum Altitude without Derating | 3000 m | 9842.5 ft |

- Net power advertised is the power available at the engine flywheel when the engine is equipped with a fan, air cleaner, clean emissions module, and alternator.

Operating Specifications – Wheel Dozer

| | | |
|---|-----------|-----------|
| Operating Weight (Tier 4 Final/Stage V) | 22 011 kg | 48,526 lb |
| Operating Weight (Tier 3/Stage IIIA equivalent) | 21 721 kg | 47,887 lb |

Operating Specifications – Scoop

| | | |
|---|-----------|-----------|
| Operating Weight (Tier 4 Final/Stage V) | 23 714 kg | 52,280 lb |
| Operating Weight (Tier 3/Stage IIIA equivalent) | 23 423 kg | 51,639 lb |

Transmission

| Transmission Type | | | Cat planetary powershift | | |
|-------------------|------|------|--------------------------|------|------|
| Speed | km/h | mph | Speed | km/h | mph |
| Forward 1 | 5.9 | 3.7 | Reverse 1 | 6.7 | 4.2 |
| Forward 2 | 10.4 | 6.5 | Reverse 2 | 11.8 | 7.3 |
| Forward 3 | 18.1 | 11.2 | Reverse 3 | 20.6 | 12.8 |
| Forward 4 | 31.3 | 19.4 | Reverse 4 | 35.5 | 22.1 |

Hydraulic System Lift/Tilt – Wheel Dozer

| | | |
|---|--------------------------------------|------------------|
| Lift/Tilt System – Circuit | Pilot operated LS valve with EH | |
| Lift/Tilt System | Variable displacement piston | |
| Maximum Flow at 2,200 rpm | 89 L/min | 23.5 gal/min |
| Relief Valve Setting – Lift/Tilt | 22 000 kPa | 3,190 psi |
| Cylinders, Double Acting: Lift, Bore, Stroke | 120 mm × 915 mm | 4.7 in × 36.0 in |
| Cylinders, Double Acting: Left and Right Tilt, Bore, Stroke | 101.6 mm × 234 mm | 4.0 in × 9.2 in |
| Pilot System | Open center, fixed displacement gear | |
| Pilot Relief Valve Setting | 21 000 kPa | 3,046 psi |

Hydraulic System – Steering

| | | |
|---------------------------------|------------------------------|--------------|
| Steering System – Circuit | Pilot, load sensing | |
| Steering System – Pump | Variable displacement piston | |
| Maximum Flow at 2,200 rpm | 147 L/min | 38.8 gal/min |
| Relief Valve Setting – Steering | 27 600 kPa | 4,003 psi |
| Total Steering Angle | 72° | |
| Steering Cycle Time (high idle) | 3.0 seconds | |
| Steering Cycle Time (low idle) | 8.2 seconds | |

Air Conditioning System

- The air conditioning system on this machine contains the fluorinated greenhouse gas refrigerant R134a (Global Warming Potential = 1430). The system contains 1.9 kg of refrigerant which has a CO₂ equivalent of 2.717 metric tonnes.

Sound Performance

| | Standard | Suppression |
|---|----------|-------------|
| Operator Sound Level (ISO 6396:2008) | 70 dBA | |
| Tier 4 Final/EU Stage V | | |
| Machine Sound Level (ISO 6395:2008) | 111 dBA | 109 dBA |
| Brazil MAR-1 and China Nonroad Stage III, equivalent to Tier 3/EU Stage IIIA | | |
| Machine Sound Level (ISO 6395:2008) | 112 dBA | 110 dBA |

- The operator sound pressure level was measured according to the test procedures and conditions specified in ISO 6396:2008. The measurement was conducted at the maximum engine cooling fan speed.
- The operator sound pressure level uncertainty is ± 2 dB(A).
- Hearing protection may be needed when the machine is operated with a cab that is not properly maintained or when the doors or windows are open for extended periods or in a noisy environment.
- The machine sound power level was measured according to the test procedures and conditions specified in ISO 6395:2008. The measurement was conducted at the maximum engine cooling fan speed.

Axles

| | |
|-------------------|-------------------------|
| Front | Planetary – Fixed |
| Rear | Planetary – Oscillating |
| Oscillation Angle | ±10° |



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Global, Excluding EU and Turkey

