



# Cat<sup>®</sup> 824K

## Wheel Dozer

# Technical Specifications

Configurations and features may vary by region. Please consult your Cat<sup>®</sup> dealer for availability in your area.

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# 824K Wheel Dozer Specifications

## Engine

Engine Model	Cat C15	
Rated Speed	1,800 rpm	
Net Power (SAE J1349:2011)	302 kW	405 hp
Net Power (ISO 9249:2007)	302 kW	405 hp
Engine Power (ISO 14396:2002)	318 kW	426 hp
Gross Power (SAE J1995:2014)		
Direct Drive	307 kW	412 hp
Converter Drive	324 kW	434 hp
Maximum Net Torque (1,300 rpm)	2005 N·m	1,479 lbf-ft
Maximum Net Torque Rise – Direct Drive	33%	
Maximum Net Torque Rise – Converter Drive	8.5%	
Maximum Altitude without Derating (Tier 4 Final/Stage V)	2834 m	9,298 ft
Maximum Altitude without Derating (Tier 3/Stage IIIA equivalent)	2773 m	9,098 ft
Bore	137.2 mm	5.4 in
Stroke	171.4 mm	6.7 in
Displacement	15.2 L	927.6 in <sup>3</sup>
High Idle Speed	2,300 rpm	
Low Idle Speed	800 rpm	

- 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.
- Two engine emission configurations are available. One meets U.S. EPA Tier 4 Final and EU Stage V emission standards. The other meets Brazil MAR-1 emission standards, equivalent to U.S. EPA Tier 3 and EU Stage IIIA emissions.

## Operating Specifications

Operating Weight – Straight Blade (Tier 4 Final/Stage V)	34 004 kg	74,966 lb
Operating Weight – Chip Scoop	38 141 kg	84,086 lb
Operating Weight – Coal Scoop	36 752 kg	81,024 lb
Blade Capacity Range	5.1-16.2 m <sup>3</sup>	6.6-21.2 yd <sup>3</sup>

## Transmission

Transmission Type	Cat planetary powershift – ECPC	
Forward 1	6.2 km/h	3.9 mph
Forward 2	11.1 km/h	6.9 mph
Forward 3	19.6 km/h	12.2 mph
Forward 4	34.8 km/h	21.6 mph
Reverse 1	7.1 km/h	4.4 mph
Reverse 2	12.6 km/h	7.8 mph
Reverse 3	22.4 km/h	13.9 mph
Reverse 4	39.7 km/h	24.7 mph

## Hydraulic System – Lift/Tilt

Pump Flow at 1,800 rpm	117 L/min	30.9 gal/min
Main Relief Pressure	26 000 kPa	3,771 psi
Maximum Supply Pressure	26 000 kPa	3,771 psi
Cylinder, Double-acting: Lift, Bore and Stroke	120 mm × 1070 mm	4.7 in × 42.1 in
Cylinder, Double-acting: Tilt and Tip, Bore and Stroke	140 mm × 230 mm	5.5 in × 9.1 in

## Hydraulic System – Steering

Steering System – Circuit	Pilot operated, load sensing	
Bore	114.3 mm	4.5 in
Stroke	576 mm	22.7 in
Steering System – Pump	Variable displacement piston	
Max Flow at 1,800 rpm	85 L/min	22.5 gal/min
Relief Valve Setting - Steering	24 000 kPa	3,481 psi
Vehicle Articulation Angle	86 degrees	

# 824K Wheel Dozer Specifications

## Service Refill Capacities

Cooling System	116 L	30.6 gal
Engine Crankcase	34 L	9.0 gal
Transmission	66 L	17.4 gal
Fuel Tank	782 L	206.6 gal
Diesel Exhaust Fluid Tank (Tier 4 Final/Stage V)	32 L	8.5 gal
Differentials and Final Drives – Front	100 L	26.4 gal
Differentials and Final Drives – Rear	110 L	29.1 gal
Hydraulic Tank Only	134 L	35.4 gal
Hydraulic System – implement/steering	214 L	56.5 gal
AC Refrigerant	20 hg	
AC Oil	146 mL	4.94 oz

- All nonroad Tier 4 Final, EU Stage V, and Japan 2014 (Tier 4 Final) diesel engines are required to use:
  - Ultra Low Sulfur Diesel (ULSD) fuels containing 15 ppm (mg/kg) sulfur or less.
  - Cat engines are compatible with the following renewable, alternative, and biodiesel\* fuels that reduce greenhouse gases:
    - Up to B20 biodiesel (FAME)\*\*
    - Up to 100% HVO and GTL renewable fuels
  - Cat DEO-ULS™ or oils that meet the Cat ECF-3, API CJ-4, and ACEA E9 specifications are required.
  - Diesel Exhaust Fluid (DEF) that meets all requirements defined in ISO 22241-1.
- \* Refer to guidelines for successful application. Please consult your Cat dealer or “Caterpillar Machine Fluids Recommendations” (SEBU6250) for details.
- \*\* Engines with aftertreatment devices can use up to B20. Engines with no aftertreatment devices can use higher blends, up to B100.

## Air Conditioning System

The air conditioning system on this machine contains the fluorinated greenhouse gas refrigerant R134a (Global Warming Potential = 1430). The system contains 2.0 kg of refrigerant which has a CO<sub>2</sub> equivalent of 2.86 metric tonnes.

## Axles

Front	Planetary – fixed
Rear	Planetary – oscillating
Oscillation Angle	±11°

## Brakes

Parking Brake	Drum and shoe, spring applied, hydraulic released
Brakes	Multi-Disc Wet (enclosed) 4 WHL

## Sound Performance

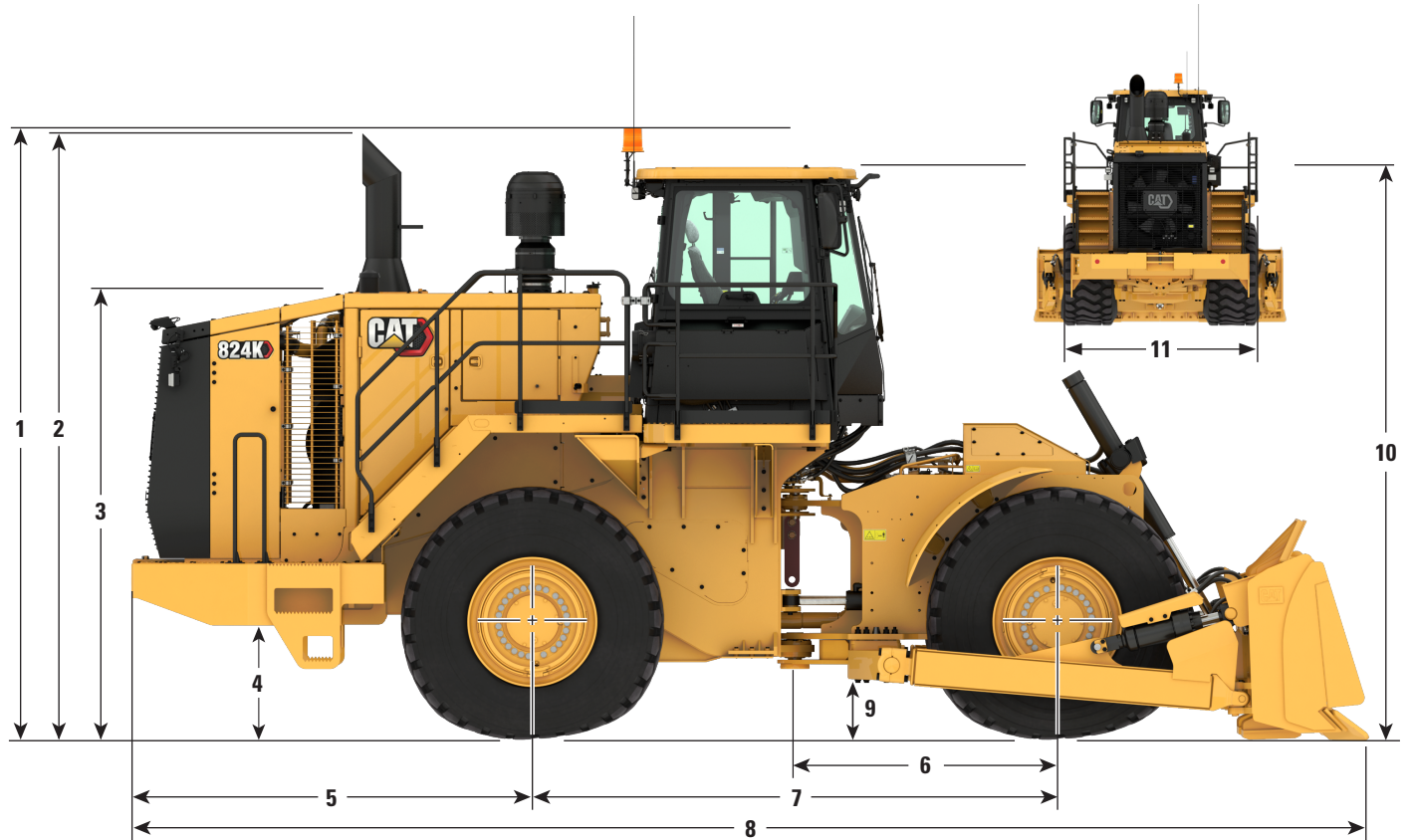
	Standard	Suppression
Operator Sound Level (ISO 6396:2008)	73 dB(A)	72 dB(A)
Machine Sound Level (ISO 6395:2008)	113 dB(A)	110 dB(A)

- The operator sound pressure level was measured according to the test procedures and conditions specified in ISO 6396:2008. The measurement was conducted at 70% of maximum engine cooling fan speed.
- 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 70% of maximum engine cooling fan speed.

# 824K Wheel Dozer Specifications

## Dimensions

All dimensions are approximate.



<b>1</b>	Height to Top of Beacon	4369 mm	14 ft 4 in
<b>2</b>	Height to Top of Exhaust Stack	4332 mm	14 ft 2.6 in
<b>3</b>	Height to Top of Hood	3204 mm	10 ft 6.1 in
<b>4</b>	Ground Clearance to Bumper	852 mm	2 ft 9.5 in
<b>5</b>	Center Line of Rear Axle to Edge of Bumper	2830 mm	9 ft 3.4 in
<b>6</b>	Center Line of Front Axle to Hitch	1850 mm	6 ft 0.8 in
<b>7</b>	Wheelbase	3700 mm	12 ft 2 in
<b>8</b>	Length with Blade on Ground (straight blade)	8422 mm	27 ft 7.6 in
<b>9</b>	Ground Clearance	441.4 mm	1 ft 5.4 in
<b>10</b>	Height to Top of Cab	4100 mm	13 ft 5.4 in
<b>11</b>	Width Over Wheels	3365 mm	11 ft 0.5 in

# 824K Wheel Dozer Specifications

## Blade Specifications

Blade Type	Capacity	Width Over End Bits	Height	Dig Depth	Ground Clearance	Maximum Tilt	Turning Radius – Outside Corner of Blade	Turning Radius – Inside Corner of Blade
Straight	5.0 m <sup>3</sup> (6.6 yd <sup>3</sup> )	4507 mm (177.4 in)	1230 mm (48.4 in)	448 mm (17.6 in)	1057 mm (41.6 in)	1167 mm (45.9 in)	6002 mm (19 ft 8.3 in)	1892 mm (6 ft 2.5 in)
Straight Push Plate	5.0 m <sup>3</sup> (6.6 yd <sup>3</sup> )	4507 mm (177.4 in)	1230 mm (48.4 in)	448 mm (17.6 in)	1057 mm (41.6 in)	1167 mm (45.9 in)	6002 mm (19 ft 8.3 in)	1892 mm (6 ft 2.5 in)
Semi-Universal	7.7 m <sup>3</sup> (10.0 yd <sup>3</sup> )	4421 mm (174.1 in)	1551 mm (61.1 in)	477 mm (18.8 in)	1068 mm (42.0 in)	1120 mm (44.1 in)	6051 mm (19 ft 10.2 in)	1777 mm (5 ft 10 in)
Universal	7.7 m <sup>3</sup> (10.0 yd <sup>3</sup> )	4352 mm (171.3 in)	1350 mm (53.1 in)	461 mm (18.1 in)	1051 mm (41.4 in)	1132 mm (44.6 in)	6104 mm (20 ft 0.3 in)	1828 mm (6 ft 0 in)
Coal	16.2 m <sup>3</sup> (21.2 yd <sup>3</sup> )	4798 mm (189.0 in)	1745 mm (68.7 in)	472 mm (18.6 in)	1072 mm (42.2 in)	1242 mm (48.9 in)	6408 mm (21 ft 0.3 in)	1819 mm (15 ft 11.6 in)
Extended Wear	8.1 m <sup>3</sup> (10.6 yd <sup>3</sup> )	4357 mm (171.6 in)	1350 mm (53.1 in)	461 mm (18.1 in)	1051 mm (41.4 in)	1132 mm (44.6 in)	6104 mm (20 ft 0.3 in)	1638 mm (5 ft 5 in)

# 824K Wheel Dozer Standard and Optional Equipment

## Standard and Optional Equipment

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

	Standard	Optional		Standard	Optional
<b>ELECTRICAL</b>			<b>OPERATOR ENVIRONMENT (CONTINUED)</b>		
Alternator, 150 amp	✓		Sun visor, front	✓	
Batteries, maintenance free (4 – 1,000 CCA)	✓		Transmission gear (indicator)	✓	
Electrical system, 24V	✓		Vital Information Management System (VIMS™): graphical information display, external data port, customizable operator profiles	✓	
Lighting system, halogen (front and rear)	✓		Wet-arm wipers/washers (front and rear): intermittent wipers (front and rear)	✓	
Lighting system, LED		✓	<b>POWER TRAIN</b>		
Lights, directional (rear)	✓		Air-to-air aftercooler	✓	
Starter, electric (heavy duty)	✓		Auto shift	✓	
<b>OPERATOR ENVIRONMENT</b>			Brakes, full hydraulic, enclosed, wet multiple disc service brakes	✓	
Air conditioner	✓		Cat clean emissions module (Tier 4 Final/Stage V)	✓	
Cab, sound-suppressed and pressurized	✓		Electro-hydraulic parking brake	✓	
Cab door, sliding window (LH)	✓		Electronic Clutch Pressure Control (ECPC)	✓	
Cab precleaner, powered	✓		Engine, Cat C15 meets Tier 3/Stage IIIA equivalent or Tier 4 Final/Stage V emission standards	✓	
Coat and hard hat hooks	✓		Fuel priming pump (electric)	✓	
Electro-hydraulic tilt and tip controls	✓		Fuel-to-air cooler	✓	
Fingertip shifting controls	✓		Integrated braking system	✓	
Flip-up armrest	✓		Muffler (under hood) (Tier 3/Stage IIIA equivalent)	✓	
Heater and defroster	✓		No-spin rear axle		✓
Horn, electric	✓		Radiator, Aluminum Modular (AMR)	✓	
Implement hydraulic lockout	✓		Separated cooling system	✓	
Instrumentation, gauges: DEF fluid level (Tier 4 Final/Stage V), engine coolant temperature, fuel level, hydraulic oil temperature, speedometer/tachometer, torque converter temperature	✓		Single Clutch Speed Shifting (SCSS)	✓	
Instrumentation, warning indicators: action alert system – three categories, brake oil pressure, electrical system – low voltage, engine failure malfunction alert and action lamp, parking brake status	✓		Steering, secondary	✓	
Light, cab, dome	✓		Throttle lock	✓	
Lunchbox and beverage holders	✓		Transmission, planetary powershift (4F/4R) speed range control	✓	
Power port (12V) for mobile phone or laptop connection	✓		<b>EFFICIENCY</b>		
Radio, AM/FM/AUX/USB/Bluetooth®		✓	Demand fan – hydraulically driven	✓	
Radio, CB ready	✓				
Radio ready for entertainment: antenna, speakers, converter (12V, 10-15 amp)	✓				
Rubber mounted, laminated, tinted glass	✓				
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	✓				

# 824K Wheel Dozer Standard and Optional Equipment

## Standard and Optional Equipment

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

	Standard	Optional		Standard	Optional
<b>COLD WEATHER</b>			<b>SERVICE (CONTINUED)</b>		
Antifreeze, -50°C (-58°F)		✓	Emergency platform egress	✓	
Antifreeze, premixed 50% concentration extended life (-34°C/-29°F)	✓		Engine, crankcase 500 hour interval with CJ-4 oil	✓	
Arctic hydraulic oil		✓	Engine precleaner	✓	
Heater, engine coolant (120V)		✓	Fast fill fuel		✓
Heater, engine coolant (240V)		✓	Fire suppression ready	✓	
Mirrors, heated		✓	Ground-level engine shutoff	✓	
Starting aid (ether), automatic	✓		Ground-level lockable master disconnect switch	✓	
<b>SAFETY</b>			Oil change system, high speed	✓	
Alarm, back-up	✓		Oil sampling valves	✓	
Cab Integrated Object Detection System (CIODS) ready	✓		Product Link™	✓	
Camera, rear vision	✓		Starting receptacle for emergency start	✓	
Emergency platform egress	✓		Tire pressure monitoring system		✓
Internal four-post rollover protective structure (ROPS/FOPS)	✓		Total hydraulic filtration system	✓	
Light, warning switched (LED strobe)	✓		<b>SOUND</b>		
Lighting, access stairway	✓		Sound suppression		✓
Mirror, internal (panoramic)	✓		<b>OTHER</b>		
Mirrors, rearview (externally mounted)	✓		Fold down exhaust stack for shipping	✓	
Seat belt with minder, retractable, 76 mm (3 in) wide	✓		Fuel tank, 782 L (207 gal)	✓	
Stairway, left and right rear access	✓		Guard, driveshaft	✓	
STIC™ control system with lockout	✓		Guards, crankcase and power train	✓	
Toe kicks	✓		Hitch, drawbar with pin	✓	
<b>SERVICE</b>			Hoses, Cat XT™	✓	
Doors, service access (locking)	✓		Hydraulic, engine, and transmission oil coolers	✓	
Dual engine precleaner		✓	Vandalism protection caplocks	✓	
Ecology drains for engine, radiator, transmission, hydraulic tank	✓		Venturi stack	✓	

# 824K Environmental Declaration

The following information applies to the machine at the time of final manufacture as configured for sale in the regions covered in this document. The content of this declaration is valid as of the date issued; however, content related to machine features and specifications are subject to change without notice. For additional information, please see the machine's Operation and Maintenance Manual.

For more information on sustainability in action and our progress, please visit <https://www.caterpillar.com/en/company/sustainability>.

## Engine

- The Cat® C15 engine is available in configurations that meet U.S. EPA Tier 4 Final and EU Stage V emission standards or Brazil MAR-1 emission standards, equivalent to U.S. EPA Tier 3 and EU Stage IIIA.
- Cat U.S. EPA Tier 4 Final and EU Stage V diesel engines are required to use ULSD (ultra-low sulfur diesel fuel with 15 ppm of sulfur or less) or ULSD blended with the following lower-carbon intensity fuels up to:
  - ✓ 20% biodiesel FAME (fatty acid methyl ester)\*
  - ✓ 100% renewable diesel, HVO (hydrotreated vegetable oil) and GTL (gas-to-liquid) fuels
- Cat engines meeting Brazil MAR-1, equivalent to U.S. EPA Tier 3 and EU Stage IIIA, are compatible with diesel fuel blended with the following lower-carbon intensity fuels up to:
  - ✓ 100% biodiesel FAME (fatty acid methyl ester)\*\*
  - ✓ 100% renewable diesel, HVO (hydrotreated vegetable oil) and GTL (gas-to-liquid) fuels

Refer to guidelines for successful application. Please consult your Cat dealer or "Caterpillar Machine Fluids Recommendations" (SEBU6250) for details.

*\*Engines with no aftertreatment devices can use higher blends, up to 100% biodiesel.*

*\*\*For use of blends higher than 20% biodiesel, consult your Cat dealer.*

## Air Conditioning System

- The air conditioning system on this machine contains the fluorinated greenhouse gas refrigerant R134a (Global Warming Potential = 1430). The system contains 2.0 kg (4.4 lb) of refrigerant which has a CO<sub>2</sub> equivalent of 2.86 metric tonnes (3.15 tons).

## Paint

- Based on best available knowledge, the maximum allowable concentration, measured in parts per million (PPM), of the following heavy metals in paint are:
  - Barium < 0.01%
  - Cadmium < 0.01%
  - Chromium < 0.01%
  - Lead < 0.01%

## Sound Performance

	Standard	Suppression
Operator Sound Level (ISO 6396:2008)	73 dB(A)	72 dB(A)
Machine Sound Level (ISO 6395:2008)	113 dB(A)	110 dB(A)

- The machine sound power level was measured according to the test ISO 6395:2008. The measurement was conducted at 70 percent of the maximum engine cooling fan speed.
- The operator sound pressure level was measured according to the test procedures and conditions specified in ISO 6396:2008. The measurement was conducted at 70 percent of the maximum engine cooling fan speed.
- Hearing protection may be needed when operating with an open operator station and cab (when not properly maintained or doors/windows open) for extended periods or in a noisy environment.

## Oils and Fluids

- Caterpillar factory fills with ethylene glycol coolants. Cat Diesel Engine Antifreeze/Coolant (DEAC) and Cat Extended Life Coolant (ELC) can be recycled. Consult your Cat dealer for more information.
- Cat Bio HYDO™ Advanced is an EU Ecolabel approved biodegradable hydraulic oil.
- Additional fluids are likely to be present, please consult the Operations and Maintenance Manual or the Application and Installation guide for complete fluid recommendations and maintenance intervals.

## Features and Technology

- The following features and technology may contribute to fuel savings and/or carbon reduction. Features may vary. Consult your Cat dealer for details.
  - Engine Idle Management System and Auto Engine Idle Shutdown reduces idle RPM and maximize fuel efficiency
  - Autoshift mode to automatically upshift or downshift based on machine speed, optimizing performance and conserving fuel
  - Load sensing hydraulic steering system enables precise machine control for easier loading
  - Extended maintenance intervals reduce fluid and filter consumption
  - Cat torque converter with lock-up clutch improves travel speeds, optimizes fuel efficiency, and eliminates torque converter losses, while lowering system heat





# Cat<sup>®</sup> 824K

## Scoops

### Features

- Available in two scoop arrangements – wood chip and coal.
- Cat wood chip and coal 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.
- Dual lift cylinders provide hydraulic lift capacity matched to the demands of the application.
- Equipped with ground level accessible swing-out reversing fan for quick inspection and easy cleanout.
- Equipped with underhood ventilation system which creates a neutral pressure environment to prevent wood chip ingestion from hood openings while providing fresh air to the alternator, electronics, and turbo.
- 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 coal or 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.

### Specifications

#### Engine

Engine Model	Cat C15	
Emissions	Tier 4 Final/Stage V, or Brazil MAR-1/China Nonroad Stage III, equivalent to Tier 3/Stage IIIA	
Gross Power		
SAE J1995:2014	324 kW	434 hp
Net Power		
SAE J1349:2011	302 kW	405 hp
Maximum Net Torque @ 1,300 rpm	2005 N•m	1,479 lbf-ft

#### Operating Specifications

Coal Scoop Operating Weight	36 752 kg	81,024 lbs
Chip Scoop Operating Weight	38 141 kg	84,086 lbs
Coal Scoop Carry Capacity	13.4 m <sup>3</sup>	17.5 yd <sup>3</sup>
Coal Scoop Doze Capacity	26.8 m <sup>3</sup>	35.0 yd <sup>3</sup>
Chip Scoop Carry Capacity	20.6 m <sup>3</sup>	27.0 yd <sup>3</sup>
Chip Scoop Doze Capacity	41.2 m <sup>3</sup>	54.0 yd <sup>3</sup>

# 824K Wheel Dozer Specifications – Scoops

## Engine

Engine Model	Cat C15	
Rated Speed	1,800 rpm	
Gross Power (SAE J1995:2014)	324 kW	434 hp
Net Power (SAE J1349:2011)	302 kW	405 hp
Bore	137.2 mm	5.4 in
Stroke	171.4 mm	6.7 in
Displacement	15.2 L	927.6 in <sup>3</sup>
Maximum Net Torque (1,300 rpm)	2005 N•m	1,479 lbf-ft
Max Net Torque Rise	33%	

- 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.
- Meets U.S. EPA Tier 4 Final and EU Stage V, or Brazil MAR-1 and China Nonroad Stage III emission standards, equivalent to U.S. EPA Tier 3 and EU Stage IIIA.

## Operating Specifications

Coal Scoop Operating Weight	36 752 kg	81,024 lb
Chip Scoop Operating Weight	38 141 kg	84,086 lb
Coal Scoop Carry Capacity	13.4 m <sup>3</sup>	17.5 yd <sup>3</sup>
Coal Scoop Doze Capacity	26.8 m <sup>3</sup>	35.0 yd <sup>3</sup>
Chip Scoop Carry Capacity	20.6 m <sup>3</sup>	27.0 yd <sup>3</sup>
Chip Scoop Doze Capacity	41.2 m <sup>3</sup>	54.0 yd <sup>3</sup>

## Transmission

Transmission Type	Cat planetary powershift	
Forward 1	6.2 km/h	3.9 mph
Forward 2	11.1 km/h	6.9 mph
Forward 3	19.6 km/h	12.2 mph
Forward 4	34.8 km/h	21.6 mph
Reverse 1	7.1 km/h	4.4 mph
Reverse 2	12.6 km/h	7.8 mph
Reverse 3	22.4 km/h	13.9 mph
Reverse 4	39.7 km/h	24.7 mph

## Hydraulic System – Lift/Tilt

Lift/Tilt System – Circuit	Pilot operated Closed Center LS valve with EH	
Lift/Tilt System	Variable displacement piston	
Max Flow at 1800 rpm	194 L/min	51.2 gal/min
Relief Valve Setting – Lift/Tilt	28 000 kPa	4,061 psi
Cylinders, Double Acting: Lift, Bore, Stroke	139.75 mm x 930 mm	5.5 in x 36.6 in
Left and Right Dump, Bore, Stroke	114.3 mm x 736 mm	4.5 in x 29.0 in
Cylinders, Double Acting: Tilt, Bore, Stroke	127 mm x 508 mm	5.0 in x 20.0 in
Pilot System	Variable displacement piston	
Pilot Relief Valve Setting	3800 kPa	551 psi

## Hydraulic System – Steering

Steering System – Circuit	Pilot, load sensing	
Steering System – Pump	Variable displacement piston	
Max Flow at 1800 rpm	85 L/min	22.5 gal/min
Relief Valve Setting - Steering	24 000 kPa	3,481 psi
Total Steering Angle	86°	
Steering Cycle Time (high idle)	3.6 sec	
Steering Cycle Time (low idle)	8.0 sec	

# 824K Wheel Dozer Specifications – Scoops

## Service Refill Capacities

Cooling System	116 L	30.6 gal
Engine Crankcase	34 L	9.0 gal
Transmission	66 L	17.4 gal
Fuel Tank	782 L	206.6 gal
Diesel Exhaust Fluid Tank (Tier 4 Final/Stage V)	32 L	8.5 gal
Differentials and Final Drives – Front	100 L	26.4 gal
Differentials and Final Drives – Rear	110 L	29.1 gal
Hydraulic Tank Only	134 L	35.4 gal
Hydraulic System – implement/steering	214 L	56.5 gal
AC Refrigerant	20 hg	
AC Oil	146 mL	4.94 oz

- All nonroad Tier 4 Final, EU Stage V, and Japan 2014 (Tier 4 Final) diesel engines are required to use:
  - Ultra Low Sulfur Diesel (ULSD) fuels containing 15 ppm (mg/kg) sulfur or less.
  - Cat engines are compatible with the following renewable, alternative, and biodiesel\* fuels that reduce greenhouse gases:
    - Up to B20 biodiesel (FAME)\*\*
    - Up to 100% HVO and GTL renewable fuels
  - Cat DEO-ULS™ or oils that meet the Cat ECF-3, API CJ-4, and ACEA E9 specifications are required.
  - Diesel Exhaust Fluid (DEF) that meets all requirements defined in ISO 22241-1.
- \* Refer to guidelines for successful application. Please consult your Cat dealer or “Caterpillar Machine Fluids Recommendations” (SEBU6250) for details.
- \*\* Engines with aftertreatment devices can use up to B20. Engines with no aftertreatment devices can use higher blends, up to B100.

## Air Conditioning System

The air conditioning system on this machine contains the fluorinated greenhouse gas refrigerant R134a (Global Warming Potential = 1430). The system contains 2.0 kg of refrigerant which has a CO<sub>2</sub> equivalent of 2.86 metric tonnes.

## Axles

Front	Planetary – fixed
Rear	Planetary – oscillating
Oscillation Angle	±11°

## Brakes

Parking Brake	Drum and shoe, spring applied, hydraulic released
Brakes	Multi-Disc Wet (enclosed) 4 WHL

## Sound Performance

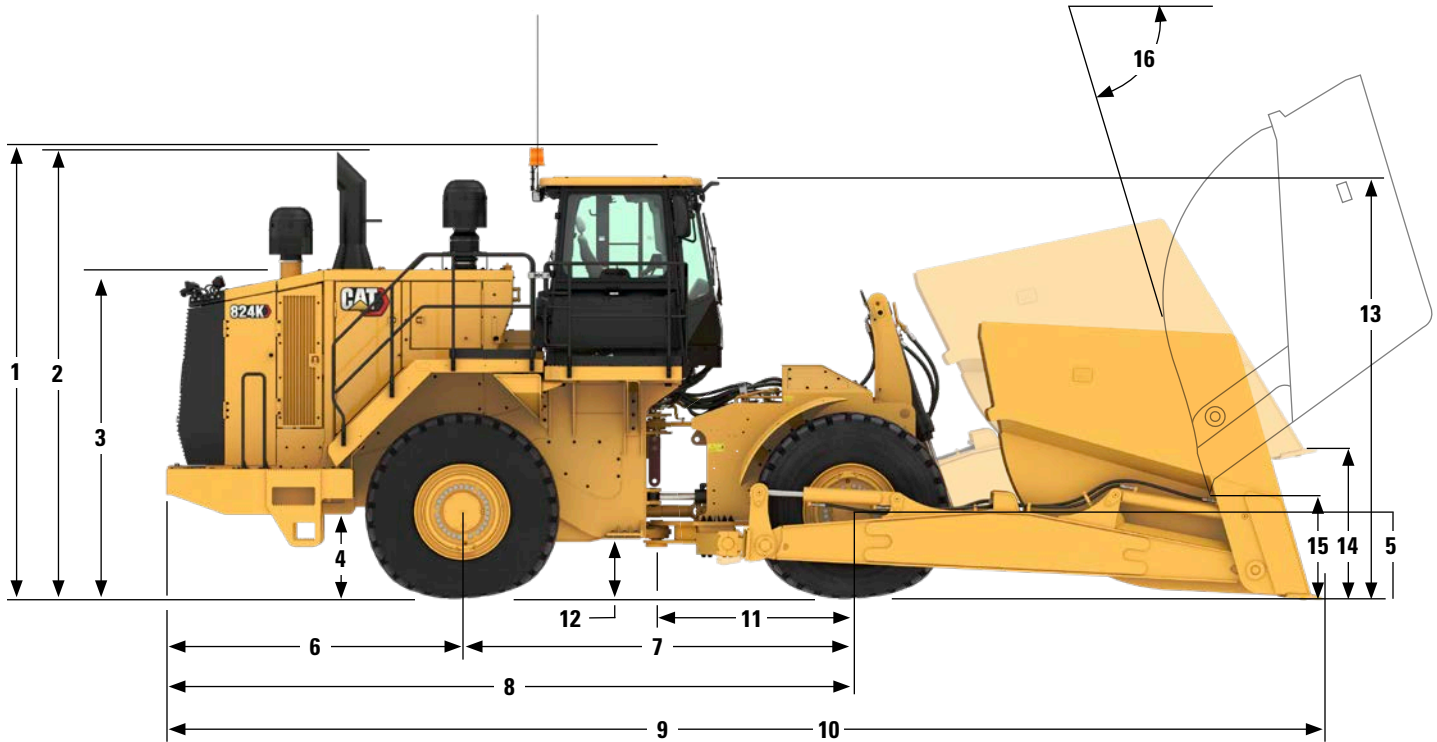
	Standard	Suppression
Operator Sound Level (ISO 6396:2008)	73 dB(A)	72 dB(A)
Machine Sound Level (ISO 6395:2008)	113 dB(A)	110 dB(A)

- The operator sound pressure level was measured according to the test procedures and conditions specified in ISO 6396:2008. The measurement was conducted at 70% of maximum engine cooling fan speed.
- 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 70% of maximum engine cooling fan speed.

# 824K Wheel Dozer Specifications – Scoops

## Dimensions

All dimensions are approximate.



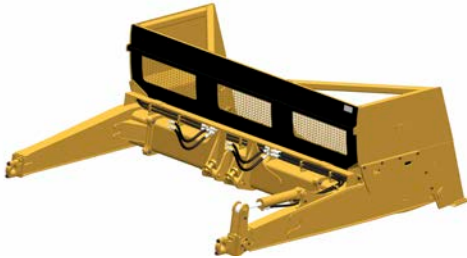
<b>1</b>	Ground to Top of Beacon	4422 mm	14 ft 6.1 in
<b>2</b>	Ground to Top of Exhaust Stack	4332 mm	14 ft 2.6 in
<b>3</b>	Ground to Top of Hood	3204 mm	10 ft 6.1 in
<b>4</b>	Ground to Bumper Clearance	852 mm	2 ft 9.5 in
<b>5</b>	Ground to Center of Front Axle	878 mm	2 ft 10.6 in
<b>6</b>	Centerline of Rear Axle to Edge of Bumper	2830 mm	9 ft 3.4 in
<b>7</b>	Wheelbase	3700 mm	12 ft 2.0 in
<b>8</b>	Length to Front Tire	7365 mm	24 ft 2.0 in
<b>9</b>	Length with Coal Scoop on Ground	10 565 mm	34 ft 7.9 in
<b>10</b>	Length with Chip Scoop on Ground	10 997 mm	36 ft 1 in
<b>11</b>	Centerline of Front Axle to Hitch	1850 mm	6 ft 0.8 in
<b>12</b>	Ground Clearance	534 mm	1 ft 9.0 in
<b>13</b>	Height to Top of Cab	4100 mm	13 ft 5.4 in
<b>14</b>	Height to Edge of Retracted Scoop – Chip Scoop	2191 mm	7 ft 2.3 in
<b>15</b>	Height to Edge of Dumped Scoop – Chip Scoop	1526 mm	5 ft 0.1 in
<b>16</b>	Dump Angle at Full Lift Height – Chip Scoop	77°	

# 824K Wheel Dozer Specifications – Scoops

## Scoops



Large capacity scoops for both wood chip and coal applications. A mesh screen integrated into the back of the scoop maintains visibility to the cutting edge. The chip scoop version has extra screens at the top due to higher capacity.



Both scoops come with dual lift cylinders for increased lift capacity. Scoop tilt function is standard and provides  $\pm 3$  degrees of tilt to maintain grade conditions and keep your operation safe.

## Scoop Specifications

Blade Type	Carry Capacity	Doze Capacity	Overall Width	Height	Maximum Tilt	Weight	Total Operating Weight
Coal Scoop	13.4 m <sup>3</sup>	26.8 m <sup>3</sup>	4099 mm	2015 mm	$\pm 3$ degrees	6964 kg	36 752 kg
	17.5 yd <sup>3</sup>	35.0 yd <sup>3</sup>	13 ft 5.4 in	6 ft 7.3 in		15,353 lbs	81,024 lbs
Chip Scoop	20.6 m <sup>3</sup>	41.2 m <sup>3</sup>	4091 mm	2475 mm	$\pm 3$ degrees	8307 kg	38 141 kg
	27.0 yd <sup>3</sup>	54.0 yd <sup>3</sup>	13 ft 5.1 in	8 ft 1.4 in		18,314 lbs	84,086 lbs

# 824K Wheel Dozer Specifications – Scoops

## Standard and Optional Equipment

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

	Standard	Optional
<b>ELECTRICAL</b>		
Alternator, 150 amp	✓	
Batteries, maintenance free (4 – 1,000 CCA)	✓	
Electrical system, 24V	✓	
Lighting system, halogen (front and rear)	✓	
Lighting system, LED		✓
Starter, electric (heavy duty)	✓	
<b>OPERATOR ENVIRONMENT</b>		
Air conditioner	✓	
Cab, sound-suppressed and pressurized	✓	
Cab door, sliding window (LH)	✓	
Cab precleaner, powered	✓	
Coat and hard hat hooks	✓	
Electro-hydraulic tilt and tip controls	✓	
Fingertip shifting controls	✓	
Flip-up armrest	✓	
Heater and defroster	✓	
Horn, electric	✓	
Implement hydraulic lockout	✓	
Instrumentation, gauges: DEF fluid level (Tier 4 Final/Stage V), engine coolant temperature, fuel level, hydraulic oil temperature, speedometer/tachometer, torque converter temperature	✓	
Instrumentation, warning indicators: action alert system – three categories, brake oil pressure, electrical system – low voltage, engine failure malfunction alert and action lamp, parking brake status	✓	
Light, cab, dome	✓	
Lunchbox and beverage holders	✓	
Power port (12V) for mobile phone or laptop connection	✓	
Radio, AM/FM/AUX/USB/Bluetooth		✓
Radio, CB ready	✓	
Radio ready for entertainment: antenna, speakers, converter (12V, 10-15 amp)	✓	
Rubber mounted, laminated, tinted glass	✓	
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	✓	

	Standard	Optional
<b>OPERATOR ENVIRONMENT (CONTINUED)</b>		
Sun visor, front	✓	
Transmission gear (indicator)	✓	
Vital Information Management System (VIMS): graphical information display, external data port, customizable operator profiles	✓	
Wet-arm wipers/washers (front and rear): intermittent wipers (front and rear)	✓	
<b>POWER TRAIN</b>		
Air-to-air aftercooler	✓	
Auto shift	✓	
Brakes, full hydraulic, enclosed, wet multiple disc service brakes	✓	
Cat clean emissions module (Tier 4 Final/Stage V)	✓	
Electro-hydraulic parking brake	✓	
Electronic Clutch Pressure Control (ECPC)	✓	
Engine, Cat C15 meets Tier 3/Stage IIIA equivalent or Tier 4 Final/Stage V emission standards	✓	
Fuel priming pump (electric)	✓	
Fuel-to-air cooler	✓	
Integrated braking system	✓	
Muffler (under hood) (Tier 3/Stage IIIA equivalent)	✓	
No-spin rear axle		✓
Radiator, Aluminum Modular (AMR)	✓	
Separated cooling system	✓	
Single Clutch Speed Shifting (SCSS)	✓	
Steering, secondary	✓	
Throttle lock	✓	
Transmission, planetary powershift (4F/4R) speed range control	✓	
<b>EFFICIENCY</b>		
Demand fan – swing out, hydraulically driven, reversible	✓	
Engine idle management features: auto idle kickdown, delayed engine shutdown, engine idle shutdown	✓	
Steering, load sensing	✓	
Torque converter with Lock Up Clutch (LUC)	✓	

# 824K Wheel Dozer Specifications – Scoops

## Standard and Optional Equipment

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

	Standard	Optional		Standard	Optional
<b>COLD WEATHER</b>			<b>SERVICE (CONTINUED)</b>		
Antifreeze, -50°C (-58°F)		✓	Emergency platform egress	✓	
Antifreeze, premixed 50% concentration extended life (-34°C/-29°F)	✓		Engine, crankcase 500 hour interval with CJ-4 oil	✓	
Arctic hydraulic oil		✓	Engine precleaner	✓	
Heater, engine coolant (120V)		✓	Fast fill fuel		✓
Heater, engine coolant (240V)		✓	Fire suppression ready	✓	
Mirrors, heated		✓	Ground-level engine shutoff	✓	
Starting aid (ether), automatic	✓		Ground-level lockable master disconnect switch	✓	
<b>SAFETY</b>			Oil change system, high speed	✓	
Alarm, back-up	✓		Oil sampling valves	✓	
Cab Integrated Object Detection System (CIODS) ready	✓		Product Link	✓	
Camera, rear vision	✓		Starting receptacle for emergency start	✓	
Emergency platform egress	✓		Tire pressure monitoring system		✓
Internal four-post rollover protective structure (ROPS/FOPS)	✓		Total hydraulic filtration system	✓	
Light, warning switched (LED strobe)	✓		<b>SOUND</b>		
Lighting, access stairway	✓		Sound suppression		✓
Mirror, internal (panoramic)	✓		<b>OTHER</b>		
Mirrors, rearview (externally mounted)	✓		Fold down exhaust stack for shipping	✓	
Seat belt with minder, retractable, 76 mm (3 in) wide	✓		Fuel tank, 782 L (207 gal)	✓	
Stairway, left and right rear access	✓		Guard, driveshaft	✓	
STIC control system with lockout	✓		Guards, crankcase and power train	✓	
Toe kicks	✓		Hitch, drawbar with pin	✓	
<b>SERVICE</b>			Hoses, Cat XT	✓	
Doors, service access (locking)	✓		Hydraulic, engine, and transmission oil coolers	✓	
Dual engine precleaner		✓	Vandalism protection caplocks	✓	
Ecology drains for engine, radiator, transmission, hydraulic tank	✓		Venturi stack	✓	
EZ Clean cooling package and under-hood ventilation system	✓				



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