

# 824H

## Wheel Dozer



### Engine

Engine Model	Cat <sup>®</sup> C15 diesel with ACERT <sup>™</sup> Technology	
Gross Power	299 kW	401 hp
Net Power	264 kW	354 hp

### Weights

Operating Weight	28 724 kg	63,325 lb
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### Blade Specifications

Blade Capacities	4.67 m <sup>3</sup> -16 m <sup>3</sup> (6.1 yd <sup>3</sup> -21 yd <sup>3</sup> )	
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# 824H Wheel Dozer

*Representing a long-standing commitment to quality and performance, this rugged, powerful machine is designed and built for tough applications.*

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## Power Train

- ✓ The 824H uses the Cat C15 diesel engine with ACERT™ Technology which is U.S. EPA Tier 3/EU Stage III compliant. Smooth, consistent shifting with fingertip control and electronic controls contribute to increased levels of productivity. **pg. 4**

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## Hydraulics

- ✓ The 824H uses electro-hydraulics for ease of operation and operator comfort. The new Automatic Blade Positioning (ABP) helps to improve the productivity of your machine. **pg. 6**

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## Structures

Advanced design, materials and robotic welding contribute to increased durability and overall machine strength. **pg. 7**

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## Serviceability

- ✓ Many convenient service features such as hinged service doors, easily accessible scheduled maintenance points, conveniently located sight gauges and a separated cooling system make servicing easy. Service has been improved with new transmission remote pressure taps. **pg. 12**

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## Complete Customer Support

Your Cat dealer is your single, safe source for all your equipment needs. He offers a wide range of services that will fit your operation and keep you working longer with lower costs. **pg. 14**

*The 824H Wheel Dozer was conceived and designed to surpass any competitor with exciting innovations that exceed customer expectations for performance, reliability and operator comfort.*



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### Blades

- ✓ On the 824H, you can choose from the straight blade, coal blade or the new 6.9 m<sup>3</sup> (9 yd<sup>3</sup>) standard and extreme service U-blade to allow for maximum productivity from your wheel dozer. **pg. 8**

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### Optional Features

- ✓ Various optional features are available to meet all your needs. **pg. 9**

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### Operator Station and Controls

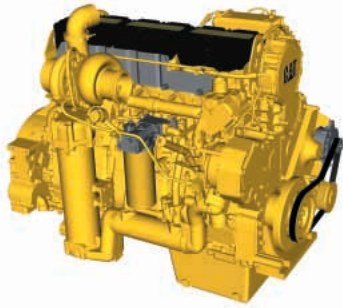
- Experience a high level of productivity through Command Control steering with integrated transmission controls, fingertip blade controls, a large viewing area and spacious operator station. **pg. 10**



✓ *New Feature*

# Power Train

*Delivers top performance and durability in tough applications.*



## **Cat® C15 Engine with ACERT™**

**Technology.** The Cat C15 engine is an increased displacement version of the proven Cat 3406 engine. The C15 is U.S. EPA Tier 3/EU Stage III compliant and features a 3.5 percent horsepower increase over the previous 3406. The four stroke engine delivers fuel economy, durability and reliability in the most demanding conditions. High torque rise delivers performance you can feel with greater rimpull, lift force and faster cycle times. Resilient engine mounts dampen vibration for lower sound levels.

**Engine Lubrication.** Engine lubricating oil is filtered, cooled and supplied by a gear-type pump.

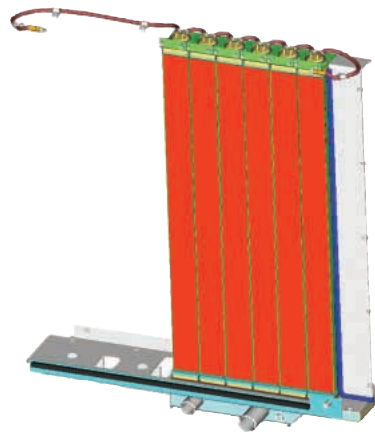
**Mechanical Electronic Unit Injector (MEUI™).** MEUI is a high-pressure, direct injection fuel system that is virtually adjustment-free. It electronically monitors operator and sensor inputs to optimize engine performance.

## **Air-to-Air Aftercooler (ATAAC) System.**

The ATAAC system provides a separate cooling for the intake manifold air. It routes hot, compressed air from the turbo and cools it with a single pass, air-to-air aluminum heat exchanger. The cooled, compressed air greatly reduces the emissions produced, meeting U.S. EPA Tier 3/EU Stage III requirements.

- Airflow matched turbocharger with power rating helps reduce emissions.
- 19 percent more bearing area allows the engine to operate at the maximum cylinder pressure.
- Higher cylinder pressure capability helps reduce fuel consumption and improves high altitude operation and provides reduced emissions.

Cylinder heat exhaust port sleeves reduce heat rejection which results in less heat transfer into the water jacket system and provides high torque rise.



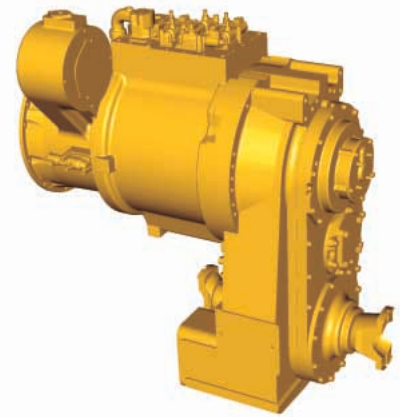
## **Next Generation Modular Radiator (NGMR).**

The parallel flow system with six cores standard (seven on the high ambient machine) improves cooling capabilities. Serviceability is also enhanced as there is no top tank to remove. The NGMR uses copper brazed brass tubes and copper fins.

## **ADEM™ IV (Advanced Diesel Engine Management) System.**

ADEM IV uses a 32-bit computer with sensors throughout the engine to regulate fuel delivery, valve timing and all other engine systems that require input to manage load and performance.

ADEM IV also offers automatic altitude compensation, a cold mode start-up strategy, oil pressure and coolant warnings which result in precise engine speed control, superior cold start capability, low smoke and emissions in all operating conditions.



**Transmission.** The extreme duty, planetary, powershift Cat transmission features heavy-duty components to handle the toughest jobs. The four planet drives operate in all gears forward and reverse. Electronic controls provide features to enhance productivity, durability and serviceability. The additions of the Electronic Clutch Pressure Control (ECPC) contributes to improved shift quality, reduced torque spikes and overall transmission durability. Control Throttle Shift (CTS) offers smoother shifts and improves clutch and power train life.

**Torque Converter.** The torque converter uses a high-capacity impeller to handle the engine's increased torque rise (24 percent) and power.

**Heavy-Duty Axles.** The fixed front and oscillating ( $\pm 13$  degrees) rear heavy-duty axles feature strong gears and bearings in both the differentials and heavy-duty final drives for increased durability. Permanently lubricated, maintenance-free U-joints result in fewer parts and improved serviceability. Free floating axles shafts can be removed independently from the wheels and planetary drives.

**Spindles and Final Drives.** Planetary units can be removed independently from the wheels and brakes. The final drives feature planetary reduction at each wheel, and with torque developed at the wheel, less stress is placed on the axle shafts.

**Differentials.** Conventional front and optional No-SPIN rear differentials deliver maximum traction in low traction or inconsistent ground conditions.

**Service Brakes.** Completely enclosed and located on the two front wheels, the service brakes are self-adjusting with modulated engagement and are designed for easy servicing. With two brake pedals, the right pedal controls standard braking while engine deceleration and braking occurs with the left pedal.

**Parking Brake.** The spring-applied, oil-released, dry drum design parking brake is mounted on the transmission output shaft driveline for manual operation. The Caterpillar® Monitoring System alerts the operator if the transmission is engaged while the parking brake is applied.



**Secondary Brake.** The secondary brake can be applied manually by the operator. In addition, the Caterpillar Monitoring System alerts the operator if pressure drops and will automatically apply the parking brake.

**Cold Start.** This feature is improved by not only ADEM IV but also a new larger starter and four higher CCA batteries (1000 CCA).

## Hydraulics

*Well-balanced hydraulics deliver precise, low-effort control and trouble-free operation.*



**Hydraulic System.** The hydraulic system provides low-effort blade control. Seat mounted levers send electrical signals to a pilot valve mounted on the front frame, moving the sound, heat and effort caused by the hydraulic valve out of the operator's station.

**Command Control Steering.** A mechanical feedback system combines with valve ratio to provide quarter-turn, side-to-side steering. Unlike systems that rely on steering wheel velocity to activate steering cylinders, Command Control steering directly links the steering wheel position to articulation. The speed the machine turns is proportional to the steering wheel position. The benefit is precise control, quicker response and dramatically reduced operator motion and effort.

**Hydraulic Power Steering.** Center-point frame articulation permits the front and rear wheels to track with hydraulic power steering. The hydraulic system has full-flow filtering. The steering wheel operated pilot valve controls flow to the steering cylinders. The steering angle is  $\pm 42$  degrees.

**Load Sensing Steering.** With load sensing steering, machine performance is maximized because power is directed to the steering system only when the operator steers the machine. This allows more power to be applied to the ground when the machine is not being steered. It also helps decrease fuel consumption since the steering system does not constantly draw on the engine.

### **Positive Displacement Hydraulic Pumps.**

All hydraulic pumps are mounted on a single pump drive for improved serviceability

**XT™-3 and XT™-6 Hose.** Reliable XT-3 ES and XT-6 ES hoses, along with o-ring face seals and a large capacity life cylinder complete the hydraulic system. Reliable components reduce the risk of leaks and blown lines, helping protect the environment and reducing operating costs.

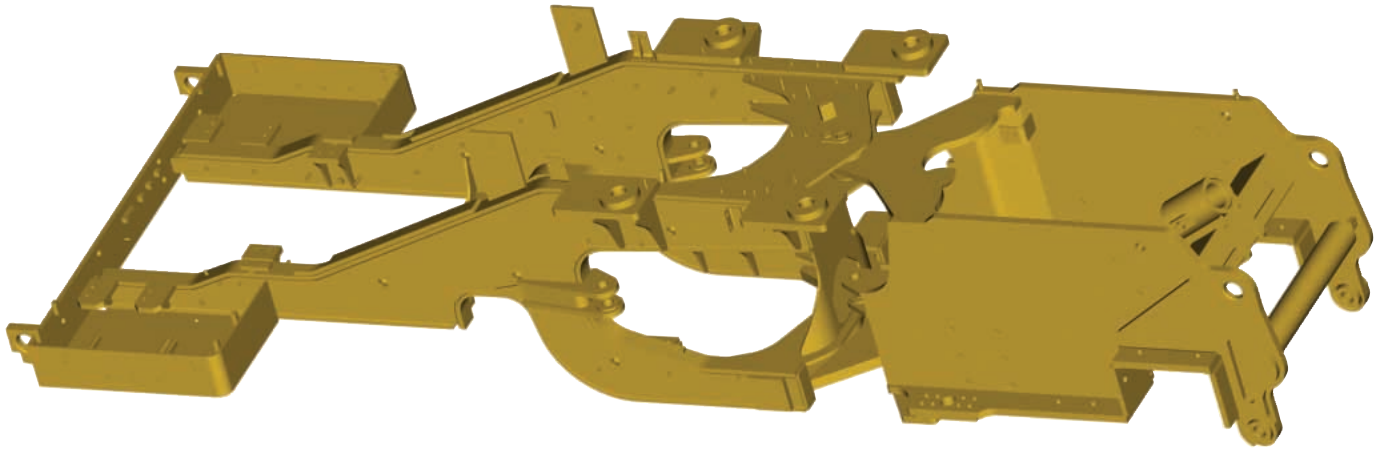


### **Automatic Blade Positioning.**

Operator automation is provided through the use of in-cylinder sensors and implement software.

## Structures

*Advanced design and materials provide superior strength to the purpose built structures.*



**Structure Construction.** Combines the use of robotic welding on up to 90 percent of the 824H, while castings are used in several areas to increase strength by helping to spread the loads and reduce the number of parts. This provides highly consistent welds with deep plate penetration and excellent plate fusion. The benefits are increased durability and fatigue strength. The computer controlled machining ensures the alignment of pin bore, axle pad, cab mount and transmission/engine components.

### **Box Section Engine End Frame.**

Designed to resist twisting and torsional forces, the box section engine end frame provides a solid foundation for the axles, engine and transmission.

**Dozer Front Frame.** Built specifically to handle greater amounts of rimpull, the 824H can readily push its weight plus the weight of the material for long distances in heavy dozing applications.

**Spread Hitch Design.** The spread hitch design improves load distribution by reducing loads to the hitch bearings. The large center hitch design improves hydraulic line routing and makes service access easier.

**Upper and Lower Hitch Pins.** The hitch pins pivot on double-tapered roller bearings. Box-style sections in the hitch pins and crossmember assembly improve frame structure strength. Increased diameter lower hitch pins add to the robust design.

### **Engine and Transmission Mounts.**

A rubber isolation mount design reduces noise and vibration.

## Blades

*Multiple box-section construction with heat treated moldboard and DH-2 steel edges and end bits contribute to long life.*

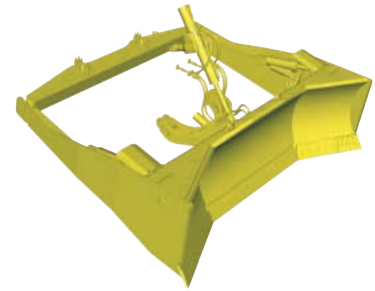


**Operator Controls.** Lift, tilt, tip and ABP are standard. The controls are conveniently located to the right of the operator.

**Applications.** The 824H excels at high production dozing and spreading fill, backfilling, stockpiling, charging hoppers, maintaining haul roads and cleaning up around job sites.

**Blade Options.** Contact your Cat® dealer for blade options and availability that include:

- **Straight Blade.** Straight blade is used for general work.



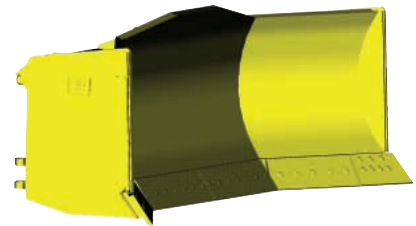
- **Extended Wear Bulldozer**

**Arrangement.** The Extended Wear bulldozer arrangement is designed for moving large loads over long distances in harsh conditions. It consists of a 6.9 m<sup>3</sup> (9 yd<sup>3</sup>) U-blade with Abrasion Resistant Material (ARM) on the front and sides, cutting edges, push arms and integrated cylinder guards, and a heavy-duty stabilizer.

- **Coal Blade.** The coal blade can increase coal capacity up to 50 percent per cycle over standard U-blades.

- **Woodchip Universal Blade.**

The woodchip U-blade has a unique wing configuration that provides aggressive side setting into the chip pile, quickly knocking down stacked chips and loading the blade.



**Universal Bulldozer Arrangement.**

6.9 m<sup>3</sup> (9 yd<sup>3</sup>) Universal blade for moving large loads over a long distance while retaining control of the load.

**Custom Options.** Ask your Cat dealer about Cat Work Tool or Custom options.



## Optional Features

*Available options can augment the 824H and meet your needs.*

**Full Coverage Fenders.** The front fenders extend beyond the outermost surface of the machine to prevent mud from splattering the front and side windows and to keep rocks from flying into window glass.

The optional full coverage fender package includes front fenders with mud flaps.

Full coverage rear fenders extend to the bumper, along with a rear rubber (lateral) fender extension to ensure the entire tire width is covered.

**Optional Counterweight.** This feature is located on either side of the front frame. For each specific application, there is a correct machine weight for proper balancing of traction, flotation, mobility and response. Lower machine weight is usually required for typical second gear applications such as fill spreading, stockpiling, road maintenance, towing implements and shovel cleanup. Higher machine weight is usually required for such typical first gear applications as heavy dozing and pushloading.



### **Optional Sliding Cab Window.**

Located in the right and left doors are optional sliding windows to provide access to outside air without opening the door.

**Floodlights.** Located on the 824H exterior, floodlights are super damp and will last up to seven times longer than previous lights. An auxiliary light package with the cab (two facing forward and two facing rearward) is available.

**Fast Fuel Fill.** High speed fueling allows your 824H to stay in production longer.

### **Cat® Product Link (Attachment).**

Product Link allows tracking of machine location and service hours through global positioning technology (GPS) and provides all logged diagnostic codes. This feature is available to dealers in North America and certain licensed countries. To verify if a license exists for your location, please contact your Cat dealer.

## Operator Station and Controls

*Ergonomically designed for operator comfort with low-effort controls increases efficiency and productivity.*



**Right and Left Rear-Hinged Doors.**

A walk-through operator's station comes from right and left doors that can be fully opened and latched for easy entry and exit.

**Sound Levels.** A thick, non-metallic floor, along with outside the cab hydraulics and a separated cooling system contribute to a quiet work environment.

**1 Viewing Area.** The internal ROPS and bonded front glass eliminate the distracting metal frames to help increase the viewing area. The angled hood and larger windows allow the operator to see objects closer to the machine.

**2 Cat® Comfort Series Seat.** The six-way adjustable seat provides comfort by reducing the pressure on the lower back and thighs while offering unrestricted arm and leg movement. Air suspension adds to the overall comfort level by smoothing the ride over rough terrain.

**3 Blade Control and Joystick.** The pod is situated at an 18 degree angle for natural wrist positioning. The controller offers a sturdy handle for multiple hand positions. The actuation button for the blade tip function is located on the joystick, providing total blade control.

**Storage Space.** The cab features room for a lunch cooler, insulated bottle, cup and other personal items. A coathook is also provided.

**Radio Ready.** A 12-volt, 15-amp converter, speakers, antenna, all wiring and brackets for a communications or entertainment radio is provided.

**4 Caterpillar Monitoring System.**

Gauges on the left side of the dash monitor fuel level, engine coolant, hydraulic oil and torque converter oil temperatures.

The center panel contains the tachometer/speedometer.

On the right side panel, a three-level warning system provides full-time monitoring of key functions. The system alerts the operator of immediate or impending problems with air inlet temperature, brake oil pressure, electrical system low voltage, engine oil pressure, engine overspeed, fuel filter status, parking brake status, steering oil pressure and transmission filter status.

**12-Volt Power Supply.** Radios, phones and laptop computers can be powered from the cab with the 12-volt, 15-amp power supply provided. A laptop computer can run Cat Electronic Technician (ET) software to access the enhanced engine, transmission and blade control system diagnostics.

**Service Brakes.** Standard braking is offered with the right pedal.

**5 Decelerator Pedal.** Engine deceleration for the first 50 percent of travel is followed by the brakes engaging. This left pedal enables the operator to slow down when the throttle lock is engaged and return to throttle lock without pressing a button.

**6 Throttle Lock.** Similar to cruise control in an automobile, throttle lock allows the operator to preset the engine speed for operator and machine efficiency.

**Air Conditioning.** Blended air provides immediate temperature changes, clears windows with ease and improves operator comfort. The system is located behind the operator's seat and uses R134a refrigerant.

**Ventilation Ducts and Vents.**

More airflow is directed to the operator and windows, while post-mounted vents direct air to the rear windows.

**7 Automatic Blade Positioning (ABP).**

This patented system is intended to lower fatigue, increase comfort and make operators more productive. It mimics manual functions by automatically lowering the blade when the machine is shifted forward and raising it in reverse. The set points to where the blade raises and lowers can be easily changed from inside the cab. Additionally, a kick-out feature of the system will allow the operator to raise/lower the blade without having to hold the joystick in place. The operator always maintains full control of the blade during this cycle with the ability to override ABP.

## Serviceability

*Having easy daily maintenance is the way to get it done.*



### **Caterpillar Monitoring System.**

Diagnostics are provided that allow technicians to review a machine's operation and quickly troubleshoot problems. Operating parameters, diagnostic codes and out-of-range gauge readings are displayed through the diagnostic connector. There are also pressure taps for easy hydraulic system checks.

**Service Access.** Scheduled maintenance points are well within reach. A remote grease fitting is provided to lubricate the lift cylinder yoke. Removable tread plates in the platform give access to less commonly serviced components. With the 824H, the transmission (ECPC) pressure taps are now located behind the cab, under the platform door for easy access.

**Daily Maintenance.** Lockable ground level service doors give quick access to engine oil fill and dipstick, coolant sight gauge, rear frame grease fittings, relay panel and electrical breakers.

All four maintenance-free batteries are secure in a built-in battery box located in the right rear frame. U-joints are lifetime lubricated, leaving the slip joint as the only driveline component needing grease.

**Filter Access.** The left platform offers access to the primary filter, while the engine oil filter is accessed from the right platform.

### **Air Filter Restriction Sight Gauge.**

This can be viewed from the cab or platform.

**Transmission Oil Fill Tube.** The tube is located beneath the platform area and the transmission oil dipstick sight gauge is located next to the fill tube for easy maintenance.

### **500 Hour Oil Change Interval.**

Uptime and production are increased by doubling the time between oil and filter changes without requiring increased oil sump capacity.

**Separated Cooling System.** The fan and radiator are isolated away from the engine for a quieter running machine. NGMR reduces radiator repair time. The new metal engine enclosure is completely redesigned for greater durability and to provide easy access for daily maintenance and inspection.

**Hinged Hydraulic Oil Cooler.** This can be swung open 30 degrees without special tools.

**Hinged Air Conditioning Condenser.**

This swings open 30 degrees and coupled with the swing-out oil cooler, allows the cooling system to be cleaned quickly and easily.

**Operator Station.** In about 45 minutes, the operator station can be removed or replaced without having to disconnect hydraulic lines. Quick disconnect couplings allow fast disconnect of the air conditioning unit without releasing refrigerant.

**Engine Shutdown Switch.** This switch is located inside the left radiator screen door for simple access and extended switch life.

**Bolt-on Bumper.** The angle of departure is improved from 18 degrees to 20 degrees by shortening the overall machine length.

**Battery Box.** Maintenance-free batteries are located in the battery box located in the right side bumper for convenient access.

**Tool Box.** The tool box is located in the left side bumper to provide additional protection against harsh work environments.



## Complete Customer Support

*Caterpillar® dealers are there to help you keep your machines up and running for maximum productivity.*



**Machine Selection.** Make detailed comparisons of the machines under consideration before purchasing. Cat dealers can estimate component life, preventive maintenance cost and the true cost of lost production.

**Purchase.** Look past initial price. Consider the financing options available as well as day-to-day operating costs. Look at dealer services that can be included in the cost of the machine to yield lower equipment owning and operating costs over the long run.

### **Customer Support Agreements.**

Cat dealers offer a variety of product support agreements and work with their customers to develop a plan that best meets specific needs. These plans can cover the entire machine, including attachments, to help protect the customer's investment.

**Product Support.** You will find nearly all parts at our dealer parts counter. Cat dealers use a worldwide computer network to find in-stock parts to minimize downtime. Save money with genuine Cat® Reman parts. You receive the same warranty and reliability as new products at cost savings of 40 to 70 percent.

**Operation.** Improving operating techniques can boost your profits. Your Cat dealer has training video tapes, literature, application and equipment training courses and other ideas to help you increase productivity.

**Maintenance Services.** More equipment buyers are planning for effective maintenance before buying equipment. Choose from your Cat dealer's wide range of maintenance services at the time you purchase your machine. Repair option programs guarantee the cost of repairs up front. Diagnostic programs such as S-O-S<sup>SM</sup> and Coolant Sampling and Technical Analysis help you avoid unscheduled repairs.

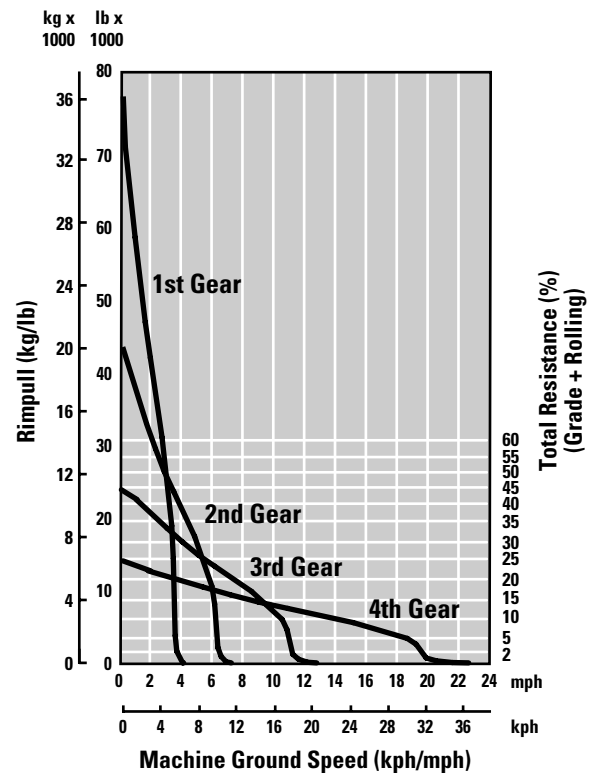
**Replacement.** Repair, rebuild or replace? Your Cat dealer can help you evaluate the cost involved so you can make the right choice.

**SAFETY.CAT.COM™.**

## Engine

Engine Model	Cat® C15 diesel with ACERT™ Technology	
Gross Power	299 kW	401 hp
Net Power	264 kW	354 hp
Direct Drive Net Power – Caterpillar	264 kW	354 hp
Direct Drive Net Power – EEC 80/1269	264 kW	354 hp
Direct Drive Net Power – ISO 9249	264 kW	354 hp
Direct Drive Net Power – SAE J1349 (JAN90)	261 kW	350 hp
Converter Drive Net Power – Caterpillar	264 kW	354 hp
Converter Drive Net Power – EEC 80/1269	264 kW	354 hp
Converter Drive Net Power – ISO 9249	264 kW	354 hp
Converter Drive Net Power – SAE J1349 (JAN90)	261 kW	350 hp
Bore	137 mm	5.4 in
Stroke	171 mm	6.7 in
Displacement	15.2 L	928 in <sup>3</sup>

- These ratings apply at 1,800 rpm when tested under the specific standard conditions for the specified standard.
- Engine is U.S. EPA Tier 3/EU Stage III compliant.
- Power conditions based on standard air conditions at 25° C (77° F) and 99 kPa (29.32 in Hg) dry barometer, using 35° API gravity fuel having an LHV of 42 780 kJ/kg (18,390 Btu/lb) when used at 30° C (86° F). Reference a fuel density of 838.9 g/L (7.001 lb/gal).
- Net power advertised is the power available (at the flywheel) when the engine is equipped with air cleaner, muffler, alternator and hydraulic fan drive.
- No derating required up to 3050 m (10,000 ft) altitude.



## Transmission

Converter Drive – Forward 1	6.1 kph	3.8 mph
Converter Drive – Forward 2	10.5 kph	6.5 mph
Converter Drive – Forward 3	18.3 kph	11.5 mph
Converter Drive – Forward 4	32.1 kph	20 mph
Converter Drive – Reverse 1	6.9 kph	4.3 mph
Converter Drive – Reverse 2	12 kph	7.5 mph
Converter Drive – Reverse 3	20.8 kph	13 mph
Converter Drive – Reverse 4	36.6 kph	22.7 mph

- Travel speeds based on two percent rolling resistance and 29.5-25 L-3 tires.

## Hydraulic System

Lift cylinder, bore and stroke	120.65 mm × 915 mm (4.75 in × 36.0 in)
Steering cylinder, bore and stroke	114.3 mm × 576 mm (4.5 in × 22.7 in)
Right tilt and tip, bore and stroke	152.4 mm × 255 mm (6 in × 10.0 in)
Left tilt and tip, bore and stroke	133.75 mm × 255 mm (5.3 in × 10.0 in)
Relief valve setting	24 125 kPa    3,500 psi

## Brakes

Brakes	Meet SAE/ISO 3450 1996
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## Axles

Front	Fixed
Rear	Oscillating ±13°

## Weights

Operating Weight	28 724 kg    63,325 lb
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## Service Refill Capacities

Fuel Tank – standard	700 L	185 gal
Cooling system	83 L	21.9 gal
Crankcase	34 L	9 gal
Transmission	62 L	16.4 gal
Hydraulic tank	88 L	23.2 gal
Differentials and final drives – Front	90 L	23.8 gal
Differentials and final drives – Rear	90 L	23.8 gal

## Cab

Cab	ROPS/FOPS is standard
Sound Performance Levels	Meet ANSI/SAE, SAE and ISO standards
ROPS/FOPS	Meets SAE and ISO standards

- Integrated Rollover Protective Structure (ROPS) and Falling Objects Protective Structure (FOPS) is standard in North America, Europe and Japan.
- Operator sound exposure Leq (equivalent sound pressure level) measured according to the work cycle procedures specified in ANSI/SAE J1166 OCT98 is 78 dB(A) for the cab offered by Caterpillar when properly installed, maintained and tested with the doors and windows closed.
- 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 noisy environment.
- Exterior sound pressure level for the standard machine measured at a distance of 15 m (49.2 ft) according to the test procedures specified in SAE J88 JUN86, mid-gear moving operation is 81 dB(A).
- Sound power level is 114 dB(A) measured according to the dynamic test procedure and conditions specified in ISO 6395:1988/Amd. 1:1996 for a standard machine configuration.
- For CE marked configurations, labeled sound power level is 109 dB(A) measured according to the test procedures and conditions specified in 2000/14/EC.
- ROPS meets SAE J1394, SAE J1040 APR88, ISO 3471-1:1986 and ISO 3471:1994.
- FOPS meets SAE J231 JAN81 and ISO 3449-1992 Level II.

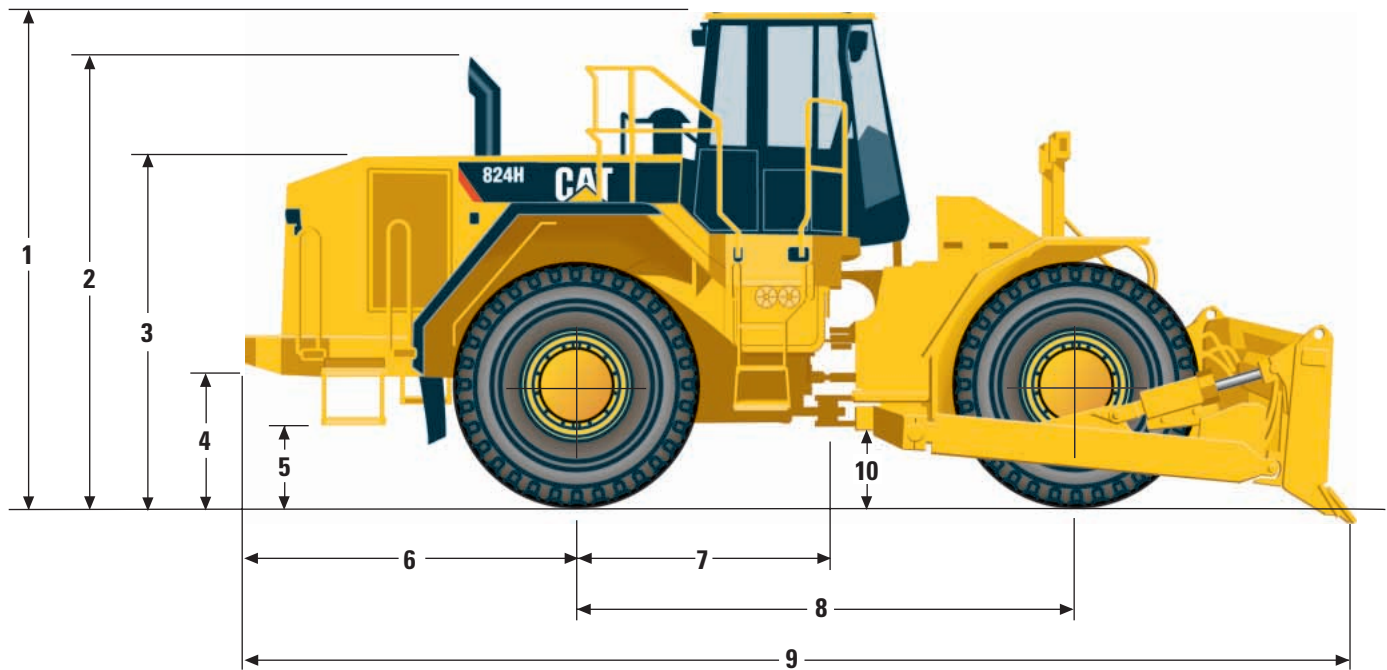
## Blade Specifications

Blade Capacities	4.67 m <sup>3</sup> -16 m <sup>3</sup> (6.1 yd <sup>3</sup> -21 yd <sup>3</sup> )	
Straight Blade – Capacity	4.67 m <sup>3</sup>	6.11 yd <sup>3</sup>
Straight Blade – Overall Width	4507 mm	14.78 ft
Straight Blade – Height	1229 mm	4.03 ft
Straight Blade – Digging Depth	430 mm	1.4 ft
Maximum Lift Above Ground	1070 mm	3.5 ft
Straight Blade – Maximum Tilt	1184 mm	3.88 ft
Straight Blade – Weight	3196 kg	7,047 lb
Straight Blade	28 724 kg	63,325 lb
– Total Operating Weight		



## Dimensions

All dimensions are approximate.



<b>1</b>	Height to Top of Cab	3700 mm	12.14 ft	<b>7</b>	Center Line of Rear Axle to Hitch	1850 mm	6.07 ft
<b>2</b>	Height to Top of Exhaust Pipe	3590 mm	11.78 ft	<b>8</b>	Wheelbase	3700 mm	12.14 ft
<b>3</b>	Height to Top of Hood	2635 mm	8.64 ft	<b>9</b>	Length with Blade on Ground	8224 mm	26.98 ft
<b>4</b>	Ground Clearance to Bumper	885 mm	2.9 ft	<b>10</b>	Ground Clearance	358 mm	1.17 ft
<b>5</b>	Height to Bottom of Ladder	446 mm	1.46 ft				
<b>6</b>	Center Line of Rear Axle to Edge of Bumper	2787 mm	8.82 ft				

## Blade Specifications

Blade Type	Capacity	Overall Width	Height	Digging Depth	Ground Clearance	Maximum Tilt
No-Blade Option				N/A		
Straight Blade – Skid Plate	4.67 m <sup>3</sup> 6.11 yd <sup>3</sup>	4507 mm 14.78 ft	1229 mm 4.03 ft	430 mm 1.4 ft	1070 mm 3.5 ft	1184 mm 3.88 ft
Straight Blade – Wear Plate	4.67 m <sup>3</sup> 6.11 yd <sup>3</sup>	4507 mm 14.78 ft	1229 mm 4.03 ft	430 mm 1.4 ft	1070 mm 3.5 ft	1184 mm 3.88 ft
SU-Blade	6.88 m <sup>3</sup> 9.0 yd <sup>3</sup>	4439 mm 14.56 ft	1584 mm 5.2 ft	542 mm 1.78 ft	996 mm 3.27 ft	1166 mm 3.82 ft
U-Blade	6.88 m <sup>3</sup> 9.0 yd <sup>3</sup>	4336 mm 14.23 ft	1365 mm 4.48 ft	518 mm 1.69 ft	956 mm 3.13 ft	1139 mm 3.73 ft
Extreme Service U-Blade includes Bulldozer Arrangement with ARM	6.88 m <sup>3</sup> 9.0 yd <sup>3</sup>	4336 mm 14.23 ft	1365 mm 4.48 ft	518 mm 1.69 ft	956 mm 3.13 ft	1139 mm 3.73 ft
Woodchip Blade	23.7 m <sup>3</sup> 31.0 yd <sup>3</sup>	4775 mm 15.67 ft	2261 mm 7.42 ft	536 mm 1.75 ft	1060 mm 3.47 ft	1254 mm 4.11 ft
Coal Blade	16.0 m <sup>3</sup> 21.0 yd <sup>3</sup>	4800 mm 15.75 ft	1803 mm 5.92 ft	536 mm 1.75 ft	1060 mm 3.47 ft	1254 mm 4.11 ft

## Standard Equipment

*Standard equipment may vary. Consult your Caterpillar dealer for details.*

### ELECTRICAL

- Alarm, back-up
- Alternator (95-amp)
- Batteries, maintenance-free (four 1,000 CCA)
- Diagnostic connector
- Electrical system (24-volt)
- Lighting system, halogen (front and rear)
- Lockable master disconnect switch
- Starter, electric (heavy-duty)
- Starting receptacle for emergency starts

### OPERATOR ENVIRONMENT

- Air conditioner
- Cab, pressurized and sound suppressed
  - Internal four-post rollover protective structure (ROPS/FOPS), radio ready (communication/entertainment) includes antenna, speakers and converter (12-volt, 15 amp), 12 volt power port, tinted glass
- Cigar lighter (12-volt, 15-amp) and ashtray
- Coat hook
- Command Control steering
- Electro-Hydraulic tilt, tip and Automatic Blade Positioning (ABP) controls
- Fingertip shift controls (steering wheel mounted)
- Gear selection display
- Heater and defroster
- Horn, electric
- Action alert system, three category
  - Instrumentation, gauges:
    - Engine coolant temperature
    - Fuel level
    - Hydraulic oil temperature
    - Speedometer/Tachometer
    - Torque converter oil temperature
- Instrumentation, warning indicators
  - Air inlet temperature
  - Brake oil pressure
  - Electrical system, low voltage
  - Engine oil pressure
  - Engine overspeed
  - Fuel filter status
  - Parking brake status
  - Steering oil pressure
  - Transmission filter status
- Light, cab (dome)
- Lunchbox and beverage holders
- Mirrors, rearview (externally mounted)

- Seat, Comfort Series (cloth), air suspension
- Seat belt, retractable, 76 mm (3 in) wide
- Tilt and lift control system lock
- Transmission gear indicator
- Wet-arm wipers/washers (front and rear)
  - Intermittent front wiper

### POWER TRAIN

- Brakes, full hydraulic, enclosed, wet-disc
- Cat axles, outboard final drives
- Demand fan, hydraulic
- Electronic fuel priming pump
- Engine, Cat C15 MEUI with ACERT™ Technology, ATAAC, ADEM™ IV controller
- Muffler, sound-suppressed
- Precleaner, engine air intake
- Radiator, Next Generation Modular Radiator (NGMR)
- Separated cooling system
- Starting aid (ether)
- Throttle lock
- Switch, transmission neutralizer lockout
- Torque converter
- Transmission, planetary, autoshift (4F/4R)

### OTHER STANDARD EQUIPMENT

- Auto Blade Positioner (ABP)
- Caterpillar o-ring face seals couplings and XT™ hoses
- Coolers
  - Engine oil, hydraulic oil and transmission oil
- Doors, service access (locking)
- Engine, crankcase, 500 hour interval with CH-4 oil
- Grouped Electronic Clutch Pressure Control, remote mounted pressure taps
- Hitch, drawbar with pin
- Hood, metallic with lockable service doors
- Muffler (under hood)
- Oil sampling valves
- Vandalism protection caplocks
- Venturi stack

### BULLDOZERS

- Bulldozer is not included in standard equipment

### TIRES, RIMS AND WHEELS

- A tire must be selected from the mandatory attachments section – base machine price includes a tire allowance

### ANTIFREEZE

- Premixed 50 percent concentration of Extended Life Coolant with freeze protection to -34° C (-29° F)

## Mandatory Attachments (select one from each group)

*Mandatory equipment may vary. Consult your Caterpillar dealer for specifics.*

	kg	lb		kg	lb
<b>Tires, Rims and Wheels</b>			<b>Bulldozer Arrangement</b>		
Note: All tires are tubeless, include rims and come in sets of four			Straight Blade – Skid Plate 4.67 m <sup>3</sup> (6.11 yd <sup>3</sup> )		
Firestone			Straight Blade – Wear Plate 4.67 m <sup>3</sup> (6.11 yd <sup>3</sup> )		
29.5-25 22 PR FS L3	-437	-964	Extended Wear – 6.9 m <sup>3</sup> (9.0 yd <sup>3</sup> )		
29.5-25 22 PR FS L4	85	188	Coal Blade – 16 m <sup>3</sup> (21 yd <sup>3</sup> )		
29.5-25 22 PR FS L5	622	1,372	No Blade		
General					
29.5-25 22 PR GEN L4	40	88			
29.5-25 22 PR GEN L5	314	692			
Goodyear					
29.5R25 GP 2B * GY L3	-82	-180			
29.5-25 22 PR GY L3	-323	-712			
29.5-25 22 PR GY L4	337	744			
29.5-25 22 PR GY L5	951	2,096			
Michelin (no charge option)					
29.5RR25 XHA * MX L3	0	0			
Omission, Tires and Rims	-3852	-8,492			
Omission of Tires	-3158	-6,962			

## Optional Equipment (with approximate change in operating weight)

*Optional equipment may vary. Consult your Caterpillar dealer for specifics.*

	kg	lb		kg	lb
Counterweight	2227	4,910	<b>Power Train</b>		
<b>Electrical</b>			Differential, No-SPIN rear		
Lights, cab auxiliary	3	7	Starting Aids		
Lights, directional signal	2	4	Heater, engine coolant		
Fast Fuel Adapter	4	9	Heater, 220-volt		
Fenders, Front and Rear Rooding	604	1,333	<b>Miscellaneous Attachments</b>		
<b>Guards, Drive Shaft</b>			Oil change, high speed		
Use with counterweight	20	44	Precleaner, turbine/trash		
Use without counterweight	58	127	Product Link		
<b>Operator Environment</b>			Secondary steering		
Mirror, internal (panoramic)	5	10	Sound suppression		
Mirror, internal (rearview)	3	7	Special application end bits		
Radio, AM/FM, weatherband, cassette	2	4	Computer Aided Earthmoving System (CAES) ready		
Sliding cab window	13	28	Antifreeze		
Visor, front	5	10			
Wiper, intermittent (rear)	1	2			

# 824H Wheel Dozer

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See your Caterpillar dealer for available options.

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