

824H/834H

Coal Scoops



Engine – 824H

Engine Model	Cat® C15 ACERT™	
Direct Drive – Gross Power	299 kW	401 hp
Net Power – ISO 9249	264 kW	354 hp

Weights – 824H

Operating Weight	30 874 kg	68,064 lb
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Engine – 834H

Engine Model	Cat® C18 ACERT™	
Direct Drive – Gross Power	414 kW	555 hp
Net Power – ISO 9249	390 kW	523 hp

Weights – 834H

Operating Weight	49 070 kg	108,180 lb
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Scoop Features

Productivity

Productivity is critical to your bottom line. Cat® coal scoops offer features and systems that help improve performance and lower your costs.

Reliability

Cat coal scoops offer field proven components and systems, high hour machine life standards and multiple rebuild options for continued uptime and long machine life.

Safety

Caterpillar continues to be proactive in developing machines that meet or exceed safety standards. Safety is an integral part of all machines and system designs, and can be seen throughout the coal scoops.

Serviceability

Easy access to the engine and other key serviceability features make servicing customer machines and in-field component exchange quick, easy, and efficient.

Operator Comfort

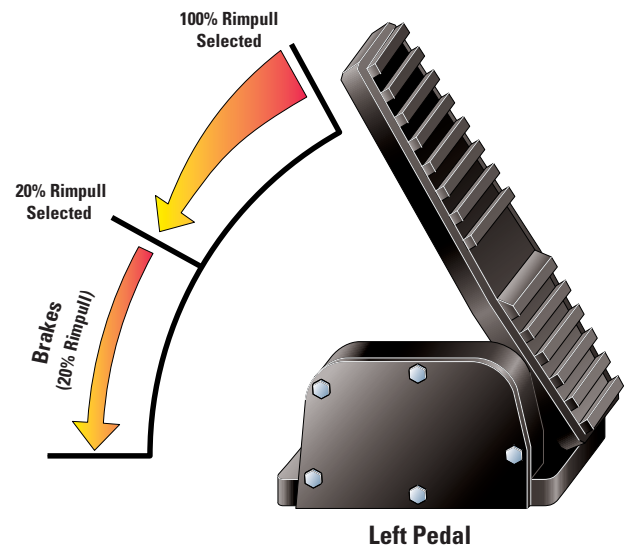
Cat coal scoops have been ergonomically designed to enhance operator comfort, allowing for higher operating efficiencies and production.



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Cat® coal scoops have been proven in the field, helping customers achieve top efficiency and productivity while keeping costs down. With the 824H and 834H, you get a purpose built machine that provides industry leading uptime, safety, serviceability and operator comfort.



Productivity

Improving your bottom line

Purpose Built Front Linkage

Cat 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 is optimized for use with this work tool to maximize machine productivity and efficiency.

Auto Idle Kickdown (AIK) (834 only)

If an operator is not actively operating the machine for a period of time, the AIK system will temporarily reduce the engine speed to save fuel. After an automated engine speed reduction, the system will automatically resume the engine speed to the previous setting when the operator engages the implement control pod of the F-N-R switch to the STIC™ Steer.

Impeller Clutch Torque Converter (ICTC) Left Pedal Control

The ICTC works with throttle lock to allow the operator to modulate rimpull to the wheels and slow the machine down without reducing engine speed. This allows the machine to maintain full hydraulic power for blade and steering control which gives the 824H and 834H a hydrostatic feel while keeping the benefits of the world's most efficient and powerful drive train and powershift transmission with lock-up control system.

Oscillating Rear Axle

The fixed front, oscillating rear axle ensures four-wheel ground contact for optimum traction and stability. The front axle is rigidly mounted to the front loader frame, while the rear axle is allowed to oscillate. This configuration allows the operator's view of the scoop to remain constant as the rear axle oscillates enabling the operator to maintain a smooth and properly graded work area in any underfoot conditions.

Load Sense Steering

The steering system utilizes a variable displacement pump for maximum machine performance by directing power through the steering system only when needed. This improves efficiency and reduces heat build up.

Reliability

Maximizing uptime, long life – it's what you expect for your bottom line



Cat C15/C18 Engine with ACERT™ Technology

The Cat C15/C18 engine with ACERT technology is U.S. EPA Tier 3 and EU Stage III compliant. It features increased horsepower and efficient fuel management for quick response, high productivity and exceptional service life. A sculptured cylinder block provides greater strength and is lighter weight.

Cat Planetary, Power Shift Transmission

Electronic shifting provides smooth, consistent shifts. Large diameter clutches coupled with four planet gear trains provide added durability for extended, trouble free life.

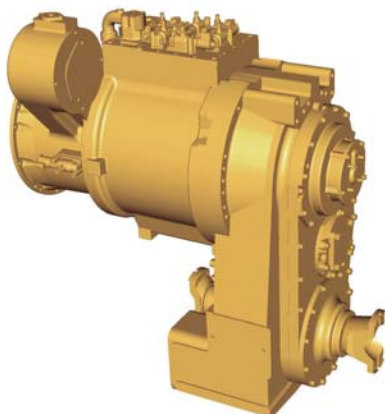
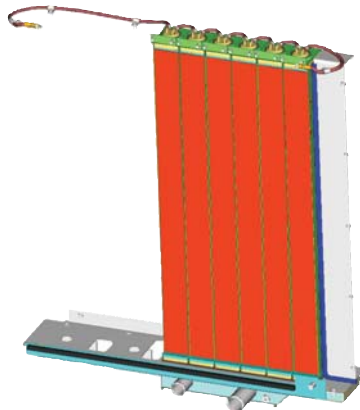
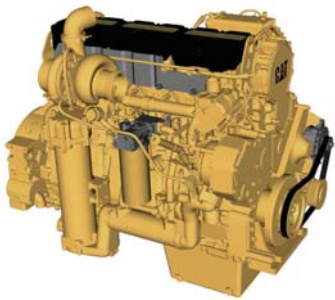
Structures

Combining the use of robotic welding and castings in critical high stress areas, more than 80 percent of the machine structure is robotically welded to provide highly consistent welds and increased strength. Castings are also used in several areas to increase strength by helping spread the loads and reduce the number of parts.

Axle-Shaft, Oil Disc Brakes

These brakes are adjustment free, fully hydraulic and completely sealed. Disc face grooves provide cooling even when brakes are applied for a longer component life.

- Location of brakes allow for improved serviceability. The axle shaft brake design allows for brake service while leaving the final drive intact.
- Axle-shaft brakes require less force by operating on the low torque side of the axle. Combined with improved axle oil circulation for increased cooling, the oil-enclosed, multiple disc brake design improves durability.





Safety

Built to protect you

Entry and Exit

Getting on and off the machine is one of the leading causes of injury on a job site. Cat coal scoops have a number of features to ensure your operator gets safely on and off the machine. They include primary and secondary stairwell exits, punch stamped tread plates, ground level nighttime stairwell light switch, full perimeter railings on upper platforms, side platform emergency egress and toe kicks and optional roading fenders.

Rearview Camera

With the new optional rearview camera, visibility is greatly enhanced. The camera is located in a pocket on the grill to protect it from damage and the elements. The camera can be set to activate only when the transmission is in reverse to help eliminate distractions in the cab, especially when in dark environments.

Visibility

Cat coal scoops offer a number of standard and optional features to enhance job site visibility. Standard and optional features include articulated wiper/washer system with intermittent features, optional rear vision camera, optional high intensity discharge lights, optional warning beacon and optional turn signals.

Serviceability

Easy to maintain. Easy to service.



Optional Swing Out Radiator Fan

The optional swing out radiator fan provides for easy access to the radiator cores for easy cleaning and inspection.

Optional Auto Reversing Fan

The fan reverses automatically at preset intervals to remove debris from the inlet screen. It can also be reversed manually from the cab.

Hydraulically Driven Demand Fan

The demand fan automatically adjusts fan speed for optimal cooling, resulting in reduced power draw on the engine, better fuel efficiency and more power for hydraulics and rimpull.

Component Access

Swing out doors on both sides of the engine compartment provide easy access to the engine oil dipstick and filler spout, S·O·SSM ports, fuel filters air conditioner compressor, engine oil filters, alternators, starting receptacle, air filter service indicator, cooler fill and ether starting aid. There are also ground level viewable sight gauges on all major systems and centralized remote pressure taps.

Shutdown and Lockout Features

An electrical disconnect switch and hydraulic lockout switch allow service technicians to perform maintenance while the machine stays static. Other shutdown or lockout devices include ground level engine shutdown and ground level steering hitch lock lever.





Operator Comfort

Best-in-class working environment

Best-in-Class Working Environment

A comfortable operator is a productive operator, which is why Caterpillar has designed the 824H and 834H with a best in-class working environment for this size scoop. The world class cab incorporates features for operator comfort and ergonomics, visibility and ease of operation.

An updated Implement Pod is fully adjustable and designed for low-effort comfort. Switches and controls are located within easy reach of the operator.

Interior noise levels are reduced to a quiet 73 dB(A).

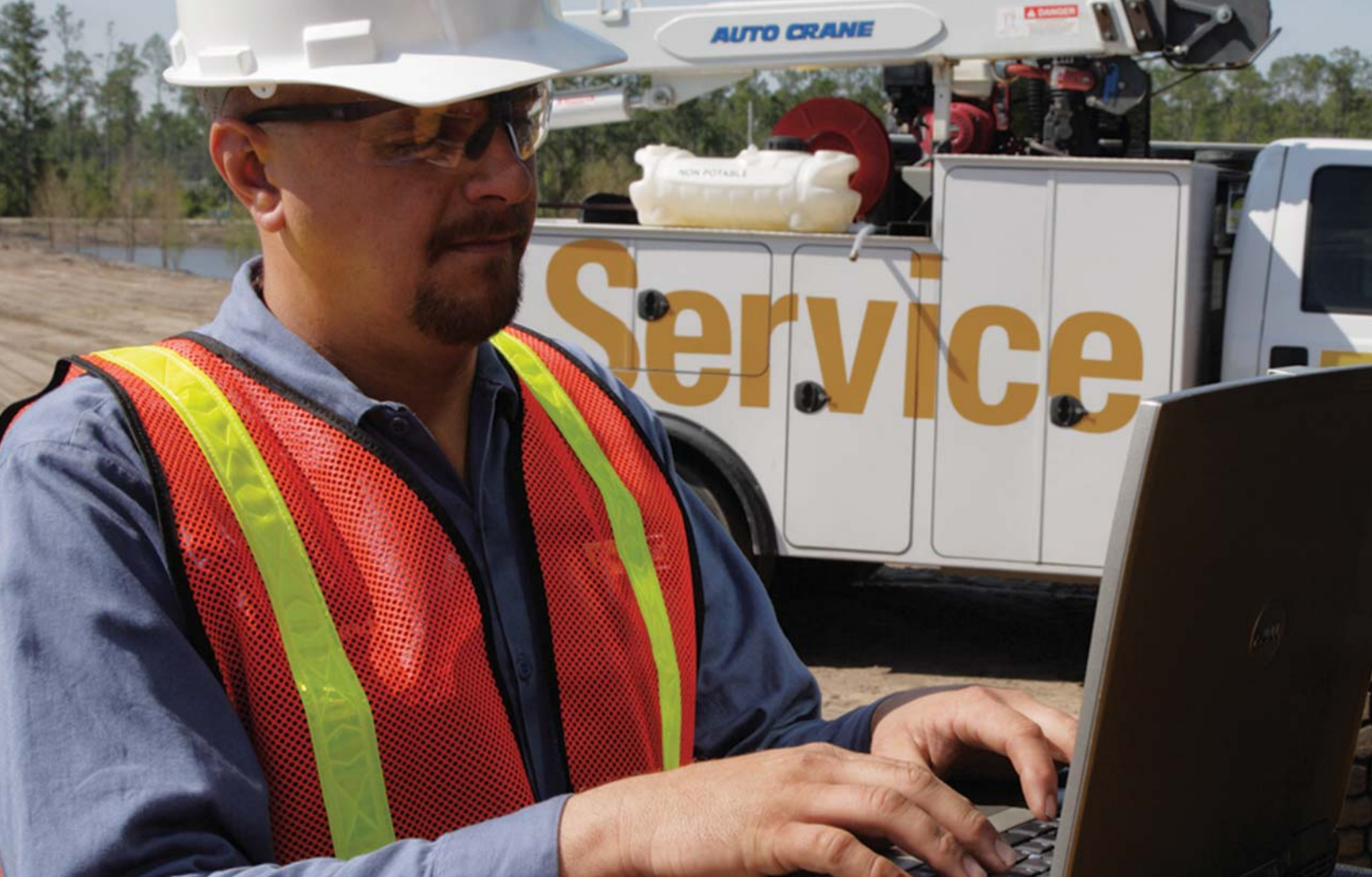
Options include heated seat for cold weather operations and Bluetooth, MP3, or satellite radio options.

STIC Steering System (834H only)

The STIC steer controller uses a single lever for steering and transmission control. Left-hand operations enable the operator to shift and change directions without letting go of the steering controls.

Idle Shutdown (834 only)

This new feature will automatically shutdown the engine after the machine has been in a safe idling state for an extended amount of time. The operator in the cab will be audibly and visually warned before the shutdown occurs.



Customer Support

Count on Cat dealers for business solutions

Selection

Cat dealers can help customers compare and choose the right machine for their business.

Financing

Cat dealers offer financing options to meet a variety of needs.

Operation

Improve operating technique for better productivity and profit with the latest Cat dealer training resources.

Product Support

Cat dealers are with customers every step of the way with unsurpassed worldwide parts support, trained technicians and customer support agreements.

Engine – 824H

Engine Model	Cat® C15 ACERT™	
Direct Drive – Gross Power	299 kW	401 hp
Direct Drive – Flywheel Power	264 kW	354 hp
Converter Drive – Gross Power	299 kW	401 hp
Converter Drive – Flywheel Power	264 kW	354 hp
Net Power – ISO 9249	264 kW	354 hp
Net Power – EEC 80/1269	264 kW	354 hp
Bore	137 mm	5.4 in
Stroke	171 mm	6.7 in
Displacement	15.2 L	928 in ³

Weights – 824H

Operating Weight	30 874 kg	68,064 lb
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Axles – 824H

Front	Planetary-Fixed	
Oscillating Rear	±13	

Service Refill Capacities – 824H

Fuel Tank	700 L	185 gal
Cooling System	83 L	21.9 gal
Crankcase	34 L	9 gal
Transmission	62 L	16.4 gal
Differentials and Final Drives – Front	90 L	23.8 gal
Differentials and Final Drives – Rear	90 L	23.8 gal
Hydraulic Tank	88 L	23.2 gal

Scoop Capacities – 824H

Carry	13.5 m ³	17.5 yd ³
Doze	27 m ³	35 yd ³

Transmission – 824H

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

Brakes – 824H

Brakes	Meet SAE/ISO 3450 1996	
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Cab – 824H

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.

824H/834H Specifications

Engine – 834H

Engine Model	Cat® C18 ACERT™	
Direct Drive – Gross Power	414 kW	555 hp
Direct Drive – Flywheel Power	349 kW	468 hp
Converter Drive – Gross Power	413 kW	554 hp
Converter Drive – Flywheel Power	372 kW	499 hp
Net Power – ISO 9249	390 kW	523 hp
Net Power – EEC 80/1269	373 kW	501 hp
Bore	145 mm	5.71 in
Stroke	183 mm	7.2 in
Displacement	18.1 L	1,104.5 in ³

Weights – 834H

Operating Weight	49 070 kg	108,180 lb
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Axles – 834H

Front	Planetary-Fixed	
Oscillating Rear	±13	

Service Refill Capacities – 834H

Fuel Tank	793 L	209.5 gal
Cooling System	107 L	28.3 gal
Crankcase	60 L	15.9 gal
Transmission	83 L	21.9 gal
Differentials and Final Drives – Front	186 L	49.1 gal
Differentials and Final Drives – Rear	190 L	50.2 gal
Hydraulic Tank	267 L	70.5 gal

Scoop Capacities – 834H

Carry	23 m ³	30 yd ³
Doze	46 m ³	60 yd ³

Transmission – 834H

Converter Drive		
Forward 1	6.8 km/h	4.2 mph
Forward 2	11.6 km/h	7.2 mph
Forward 3	20.3 km/h	12.6 mph
Forward 4	35.4 km/h	22 mph
Reverse 1	6.8 km/h	4.2 mph
Reverse 2	12.2 km/h	7.6 mph
Reverse 3	21.4 km/h	13.3 mph
Reverse 4	N/A	N/A
Direct Drive		
Forward 1	Lock Up Disabled	
Forward 2	12.4 km/h	7.7 mph
Forward 3	22.1 km/h	13.7 mph
Forward 4	38.5 km/h	23.9 mph
Reverse 1	7.2 km/h	4.5 mph
Reverse 2	13 km/h	8.1 mph
Reverse 3	23 km/h	14.3 mph
Reverse 4	N/A	N/A

Brakes – 834H

Brakes	Meet SAE/ISO 3450 1996
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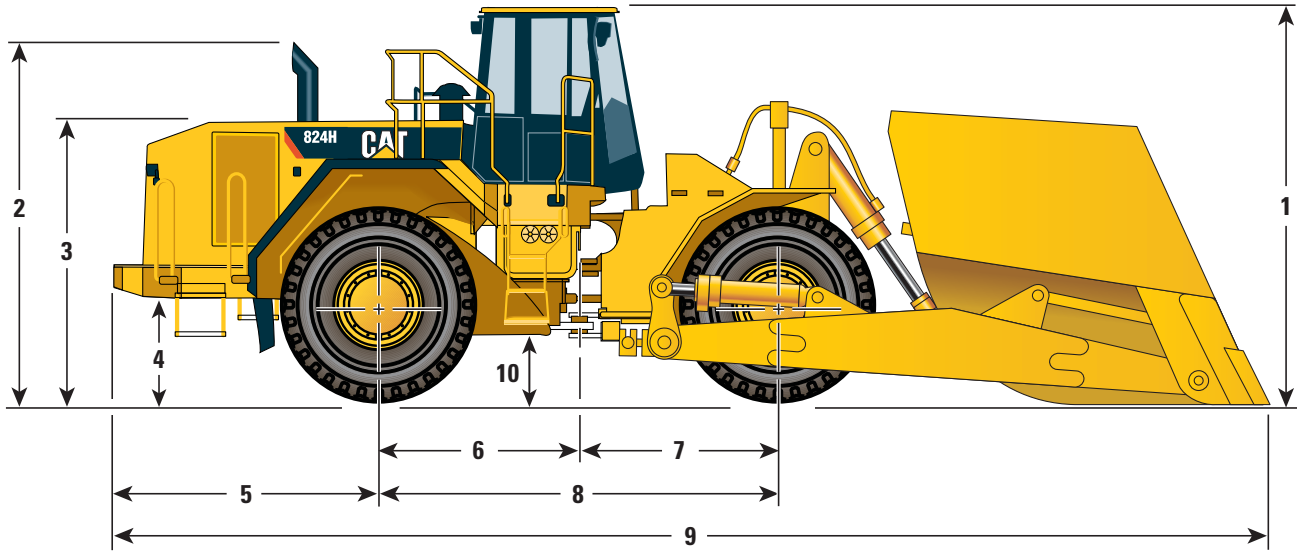
Cab – 834H

Cab	Integrated Rollover Protective Structure (ROPS)/Falling Object Protective Structure (FOPS) standard
Sound Performance Levels	Meets ANSI/SAE, SAE and ISO standards
ROPS/FOPS	Meet SAE and ISO standards

- Operator sound exposure Leq (equivalent sound pressure level) measured according to the work cycle procedures specified in ANSI/SAE J1166 OCT 98 is 77 dB(A) for the cab offered by Caterpillar when properly installed and 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 J898 JUN86, mid-gear-moving operation is 81 dB(A).
- Sound power level is 115 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, the labeled sound power level is 110 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 standards.
- FOPS meets SAE J231 JAN81 and ISO 3449-1992 Level II standards.

Dimensions – 824H

All dimensions are approximate.



	mm	ft
1 Height to top of cab	3700	12.14
2 Height to top of exhaust pipe	3590	11.78
3 Height to top of hood	2635	8.64
4 Ground clearance to bumper	885	2.90
5 Center line of rear axle to edge of bumper	2787	8.82
6 Center line of rear axle to hitch	1850	6.07
7 Center line of front axle to hitch	1850	6.07
8 Wheelbase	3700	12.14
9 Length with scoop on ground	10 453	34.30
10 Ground clearance	358	1.17

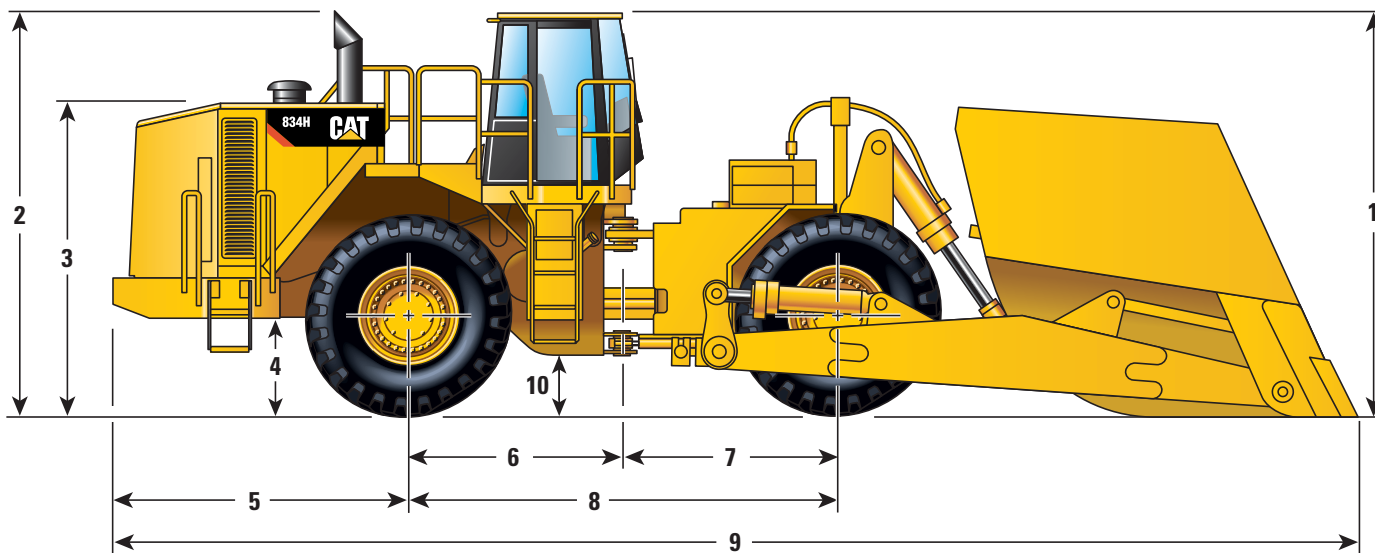
824H Scoop Specifications

	Capacity (Carry)		Capacity (Doze)		Overall Width		Height	
	m ³	yd ³	m ³	yd ³	mm	ft	mm	ft
Coal Scoop	13.5	17.5	27	35	4058	13.3	1992	6.5

824H/834H Specifications

Dimensions – 834H

All dimensions are approximate.



	mm	ft
1 Height to top of cab	4083	13.40
2 Height to top of exhaust pipe	4104	13.46
3 Height to top of hood	3146	10.32
4 Ground clearance to bumper	970	3.18
5 Center line of rear axle to edge of bumper	3132	10.28
6 Center line of rear axle to hitch	2275	7.46
7 Center line of front axle to hitch	2275	7.46
8 Wheelbase	4550	14.93
9 Length with scoop on ground	11 916	39.10
10 Ground clearance	531	1.74

834H Scoop Specifications

	Capacity (Carry)		Capacity (Doze)		Overall Width		Height	
	m ³	yd ³	m ³	yd ³	mm	ft	mm	ft
Coal Scoop	23	30	46	60	4854	15.9	2382	7.8

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

ELECTRICAL

- Alarm, back-up
- Alternator (100-amp)
- Batteries, maintenance-free
- Deutsch terminal connectors
- Electrical system (24-volt)
- Lighting system, halogen (front and rear), access stairway
- Starter, electric (heavy-duty)
- Starting receptacle for emergency starts

OPERATOR ENVIRONMENT

- Air conditioner
- Cab, sound suppressed and pressurized
- Internal four-post rollover protective structure (ROPS/FOPS), radio ready (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
- Electro-hydraulic lift, tilt and dump
- Heater and defroster
- Horn, electric
- Light, cab (dome)
- Lock-up clutch disable switch
- Lunch box and beverage holders
- Monitoring system (EMS-III)
- Action alert system, three category
- Instrumentation, gauges:
 - Engine coolant temperature
 - Fuel level
 - Hydraulic oil temperature
 - Speedometer/tachometer

- Transmission oil temperature
- Instrumentation, warning indicators
- Axle/brake oil temperature (front/rear)
- Brake oil pressure
- Electrical system, low voltage
- Engine intake/combustion air temperature
- Engine oil pressure
- Engine overspeed
- Fuel pressure
- Hydraulic oil filter status
- Parking brake status
- Transmission filter status
- Mirrors, rearview (externally mounted)
- Rimpull select switch
- Seat, Comfort Series (cloth), air suspension
- Seat belt, retractable, 76 mm (3 in) wide
- STIC control system with steering lock
- 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
- Multiple disc service brakes
- Case drain filters
- Demand fan
- Fuel priming pump (electric)
- Parking brake
- Precleaner, engine air intake
- Radiator, Next Generation Modular Radiator (NGMR)
- Separated cooling system
- Starting aid (ether) automatic

- Throttle lock
- Torque converter, impeller clutch with lockup control system and rimpull control system (switch and dial in cab)
- Transmission, planetary, autoshift (4F/3R)

OTHER STANDARD EQUIPMENT

- 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
- Hydraulic oil cooler
- Muffler (under hood)
- Oil sampling valves
- Steering, load sensing
- Vandalism protection caplocks
- Venturi stack

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)

824H/834H Optional Equipment

Optional equipment may vary. Consult your Cat dealer for details.

Lock-up clutch (834H only)

Cab, guard front windows

Cab, rear fan and grill

Cab, rubber-mounted glass

Camera, rear vision

Computer Aided Earthmoving System

(CAES) attachment ready option

Differentials, No-SPIN (rear)

Fast fill system

Heater, engine coolant

Heater, fuel

Lighting, HID

Light, warning flashing strobe

Light, warning rotating beacon

Mirror, inside (panoramic)

Oil Change System, high speed

Precleaners

Radio, AM/FM/CD/MP3

Radio, CB (ready)

Radio, Satellite, Bluetooth

Sound suppression

Switch, disconnect, remote mounted

Visor, front

824H/834H Coal Scoops

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