

854K

Wheel Dozer



Model	854K	854K
Serial Number Prefix	H8M	H9K
Engine		
Engine Model	Cat® C32 ACERT™	Cat C32 ACERT
Emissions	U.S. EPA Tier 4 Final	U.S. EPA Tier 2 Equivalent
Gross Power* – SAE J1995	671 kW 900 hp	676 kW 900 hp
Net Power – ISO 9249	607 kW 814 hp	607 kW 814 hp

Model	854K	854K
Serial Number Prefix	H8M	H9K
Operating Specifications		
Operating Weight	101 720 kg 224,254 lb	101 164 kg 223,027 lb
Blades		
Blade Capacities	25 to 45 m³ 33 to 58 yd³	

*Engine power ratings for machine with standard ambient cooling package.

Lower your cost per ton with built-in durability.

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Cat Large Wheel Dozers are designed with durability built in, ensuring maximum availability through multiple life cycles. With optimized performance and simplified serviceability, our machines allow you to move more material efficiently and safely at a lower cost per ton.

Engineered for your demanding work in large dozing applications, the 854K Wheel Dozer is the largest in the Cat Wheel Dozer line and is an ideal match for large mining operations, power generating utilities, the general contracting industry and wherever mobility, versatility and compaction is needed.

Structures

Best built for the toughest conditions.



Frames

Your key to maximum uptime and productivity is our purpose built front and rear frames.

- Full box-section frames absorb torsional forces during dozing, maintaining alignment for hitch pins and drive line.
- Spread hitch design features double tapered roller bearings and hardened pins that resist both horizontal and vertical loads.
- Enhance strength in key pin areas through the use of one piece castings.



Robust Structures

Your bottom line is improved by highly durable structures that achieve multiple life cycles and withstand the toughest loading conditions.

- Full box-section rear frame resists torsional shock and twisting forces.
- Castings in the engine end frame are used in high stress areas to spread high loads.
- Cast axle pivot mounting areas better disperse stress loads for increased structural integrity.
- 90 percent of the machine structure is robotically welded to provide highly consistent welds and increased strength.



Push Beam and Push Arm Dozer Arrangement

To ensure long life and reliability, solid one piece push beams are through-width, not merely attached to the side of the frame. In corner dozing, stresses are transferred and absorbed through a larger portion of the frame.



Steering and Transmission Integrated Control System (STIC™)

Experience maximum responsiveness and control with STIC that combines directional selection, gear selection and steering into a single lever.

- Simple side-to-side motion turns machine right or left, minimizing operator movements.
- Easy to operate finger controlled gear selection.
- Smoother, faster cycles and less operator fatigue through the use of low effort integrated controls.



Cat Planetary Powershift Transmission

Building your success begins with a best-in-class transmission designed specifically for mining applications.

- Consistent, smooth shifting and efficiency through integrated electronic controls.
- Long life and reliability through heat treat gear and metallurgy.
- Three forward and three reverse speeds to match your application.

Cat C32 ACERT Engine

Durability and efficiency at the heart of your 854K comes from the Cat C32 engine with ACERT. Optimum performance is built in through the use of a 12-cylinder, four-stroke design.

- On-demand performance through the use of turbochargers and aftercoolers.
- High Torque Rise – 33% torque rise ensures high lugging forces during dozing.
- Extended engine life through lower rpm ratings.
- Quick engine response through the use of electronic engine controls.
- U.S. EPA Tier 4 Final capable rating available for highly regulated regions.



Power Train

Move material more efficiently with improved power and control.



Impeller Clutch Torque Converter (ICTC) and Rimpull Control System (RCS)

Lower your cost per ton utilizing advanced ICTC and RCS for modulated rimpull.

- Reduce tire slippage and wear by modulating rimpull from 100 to 25 percent while depressing left pedal. After 25 percent rimpull is achieved the left pedal applies the brake.
- Reduce the potential for wheel slippage without reducing hydraulic efficiency with RCS.
- Improve fuel efficiency in certain applications with our lock-up clutch torque converter providing direct drive.

Hydraulics

Productivity enabling you to move more and make more.



Electro Hydraulic Controls

Operators increase productivity with our responsive implements feature.

- Operate comfortably through electronically controlled hydraulic cylinder stops.
- Handle easy-to-use soft detent controls.

Blade Response

Improve operator efficiency by matching the speed of the blade movement to your application.

- Three different speeds: Standard, Fine and Fast.
- Easily configured through the advisor display.
- Only affects blade raise and lower functions.

Steering System

Confident loader operation starts with precise machine control enabled by the 854K's load sensing hydraulic steering system.

- Increase efficiency with our variable displacement piston pumps.
- Achieve precise positioning for easy loading in tight areas with 40 degrees of steering articulation.
- Enhance operator comfort with integrated steering and transmission control functions.

Filtration System

Benefit from extended performance and reliability of your hydraulic system with our advanced filtration system.

- Lift/tilt case drain filters.
- Lift/tilt high pressure screens.
- Steering case drain filters.
- Steering high pressure screens.
- Hydraulic case drain filters.
- Front pump drive lube filter.
- Front and rear brake oil screens.





Your operators can work more efficiently and stay comfortable with our customer-inspired cab features.

Entry and Exit

Enter and exit the cab easily and safely with these newly designed, ergonomic features.

- Two side access points.
- Fold up STIC steer/arm rest.
- Reduced access stairway angles.

Cat Comfort Series III Seat

Enhance comfort and reduce operator fatigue with Cat Comfort Series III seat.

- High back design and extra thick, contoured cushions.
- Air suspension system.
- Easy-to-reach seat levers and controls for six way adjustments.
- Seat-mounted implement pod and STIC steer that moves with the seat.
- 76 mm (3 in) wide retractable seat belt.

Trainer Seat

Safely train other operators in comfort with our standard training seat.

- 76 mm (3 in) wide, retractable seat belt.
- Fold-down design with molded drink tray and storage.



Operator Station

Best-in-Class operator comfort and ergonomics.



Environment

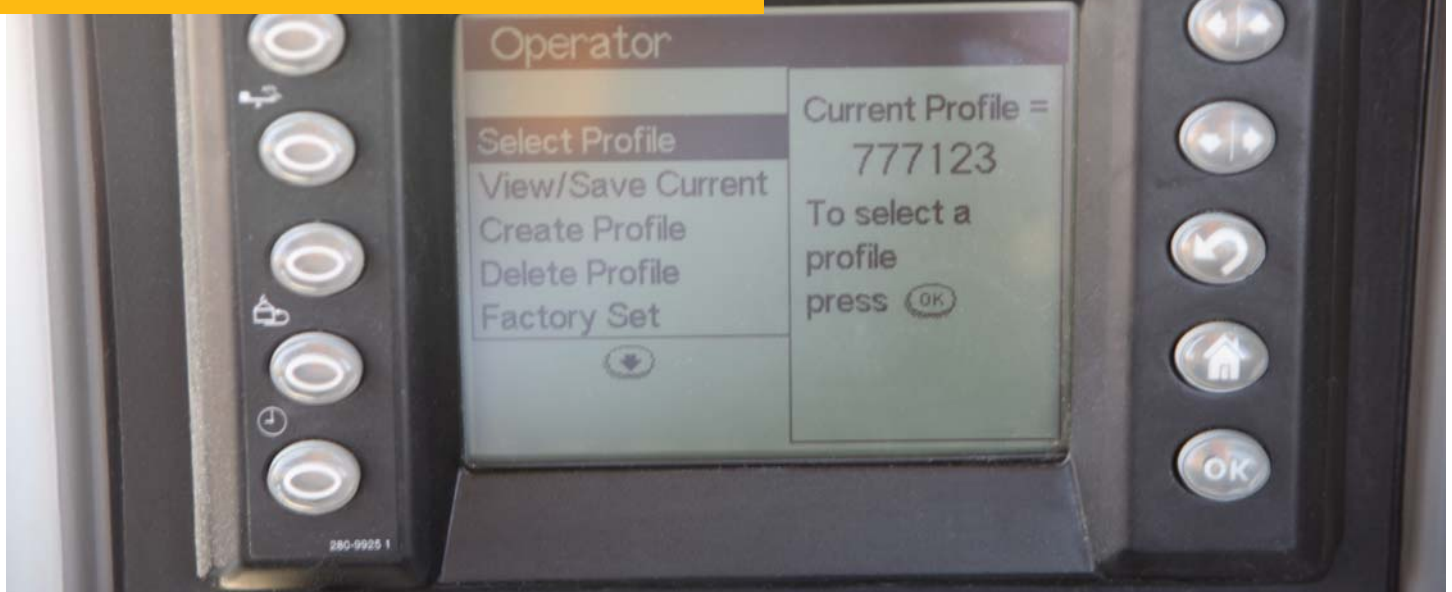
Your operator's productivity is enhanced with our clean, comfortable cab environment.

- Experience reduced vibrations from viscous cab mounts and seat air suspension.
- Maintain desired cab temperature with automatic temperature controls.
- Pressurized cab with filtered air.
- Sound level reduced to a quiet 71 dB(A).



Technology Solutions

Greater productivity through
Integrated Electronic Systems.



The 854K electronic systems have been completely integrated to function as one machine. This integration creates a smart machine and more informed operator, maximizing the productivity of both.

VIMS™ 3G

We have worked hard to help our customers and operators perform at their best through our Vital Information Management System (VIMS 3G).

- Easy-to-view Advisor Display features a large screen.
- Intuitive operation and easy navigation with our enhanced user interface.
- Decrease service time by keeping operators informed about machine system malfunction or operation.

Operator Profile

Operator comfort begins with personalized machine feature settings. Through our Advisor Display, an operator can instantly recall personalized profiles.

- Store up to 10 separate operator profiles through Advisor.
- Decrease setup time between operators by recalling personalized screen layouts.



Cat MineStar System

Work more productively.

Cat MineStar System is the industry's broadest suite of integrated mine operations and mobile equipment management technologies, configurable to suite your operation's needs. Its capability sets – Fleet, Terrain, Detect, Health and Command – contain a range of technologies that let you manage everything from fleet assignment and condition monitoring to remote and autonomous control. The 854K can take advantage of many of these advanced technologies, some of which are standard out of the factory.

Fleet

Fleet provides comprehensive, real-time machine tracking, assignment and productivity management, giving you a comprehensive overview of all operations from anywhere in the world.

Terrain for Loading

Terrain with your 854K enables high-precision management of loading operations through the use of guidance technology. It increases 854K's productivity and provides you real-time feedback for improved efficiency.

Detect

Detect helps increase operator awareness, enhancing safety at your operation. It includes a range of capabilities designed to assist the operator with areas of limited visibility around fixed and mobile equipment.

Health

Health delivers critical event-based machine condition and operating data for your entire fleet. It includes comprehensive equipment health and asset monitoring capabilities, with a wide range of diagnostic, analytic and reporting tools.



Safety

Making your safety our priority.



Powered Access System

The Cat powered access system allows easier access to the primary stairs by improving ingress and egress to and from the rear platform.

- Safe, ergonomic access system.
- All operators have adequate space when using the wide stairway.
- Operators maintain three-point contact when using full handrails on each side.
- Raise lower platform from cab level or ground.
- Occupants can quickly exit with a conveniently located emergency release valve if the loader becomes inoperable.

We are constantly improving our products in an effort to provide a safe work environment for the operator and those who work on your job site.

Machine Access

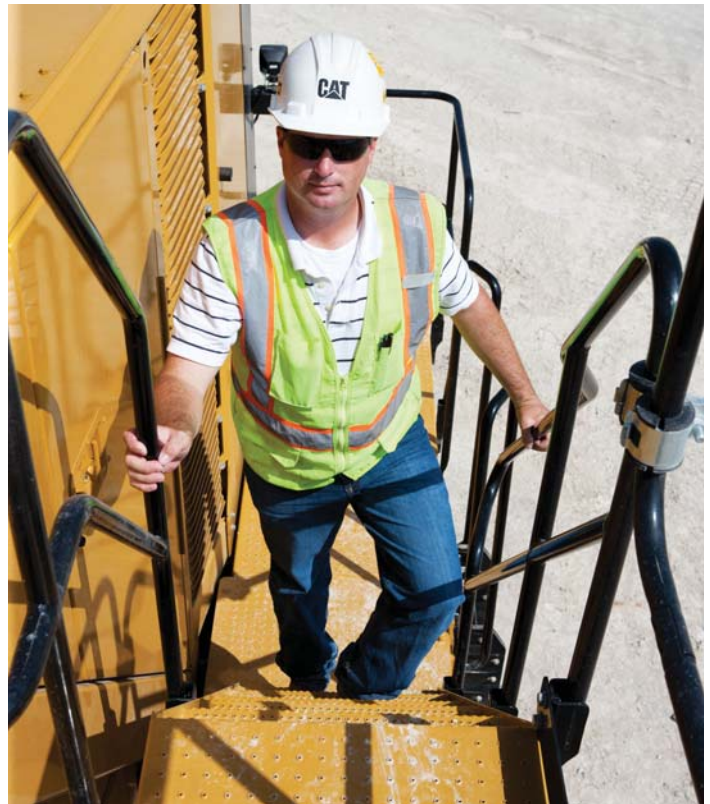
- Wider stairs with reduced stair angles increase safety for operators getting on and off the 854K.
- Walkways with non-skid surfaces and integrated lock out/tag out points are designed into the service areas.
- Windshield cleaning platforms provide safe and convenient access for the operator.
- Maintain three points of contact at all times through ground level or platform accessible service areas.
- Emergency egress access.

Visibility

- Optional pull-down window shade and optional heated mirrors ensure extended visibility for safe operation.
- Cat Detect with Object Detection System (rearview camera and radar) or Vision (rearview camera) option increases operator awareness around the machine.
- Standard HID lights provide excellent workspace visibility.
- Cab mounted LED warning beacons.

Operator Environment

- Low vibrations to the operator with viscous cab mounts and seat air suspension.
- Low interior sound levels.
- Operator training seat facilitates safe new operator training.
- Standard 76 mm (3 in) seat belts on the operator seat and operator training seat.



Serviceability

Enabling high uptime by reducing your service time.



We can help you succeed by ensuring your 854K has design features to reduce your downtime.

- Longer service intervals on fluids and filters.
- Safe and convenient service with ground level or platform access and grouped service points.
- Swing-out doors on both sides of the engine compartment provide easy access to important daily service checks.
- Ecology drains for ease of service and prevention of spilling potential environmental contaminants.
- Centralized remote pressure taps.
- Reduce downtime with VIMS system notifications so your operators and technicians can resolve any problems before failure.

Customer Support

Your Cat dealers know how to keep your mining machines productive.

Legendary Cat Dealer Support

A valued partner, your Cat dealer is available whenever you need them.

- Preventive maintenance programs and guaranteed maintenance contracts.
- Best-in-class parts availability.
- Improve your efficiency with operator training.
- Genuine Cat Remanufactured parts.



Sustainability

Stewards of the environment.



Protecting the Environment

Environmental responsibility is designed and built into our 854K's features.

- Engine Idle Shutdown can help you save fuel by avoiding unnecessary idling.
- Reduce waste to the environment with our maintenance free or extended maintenance batteries.
- Built for multiple lives, the Cat 854K is one of the most rebuilt products. To assist with maximizing machine life, Caterpillar provides a number of sustainable options such as our Reman and Certified Rebuild programs. In these programs, reused or remanufactured components can deliver cost savings of 40 to 70 percent, which lowers operating cost while benefiting the environment.
- Caterpillar offers retrofit packages to bring new features to older machines, maximizing your resource. And, when you go through the Cat Certified Rebuild program, these retrofit kits are part of the rebuild process.

Cat Blades

Dependable Dozing with blades designed for your application.



Dependable Blades

Maximize your productivity with the right blade for your dozer application.

- High strength, pressed rib construction.
- Large Cat Track-Type Tractor bolt on cutting edges and bottom wear plates.
- Optimized widths and capacities for excellent dozing and rolling characteristics.

Coal Blade

- Increase your productivity with a Cat coal blade designed to retain load control and a large capacity for lighter materials.

Semi-U Blade

Featuring the characteristics of the S and U blades into one package for increased capacity while retaining excellent spreading characteristics of a straight blade.

Heavy-Duty Semi-U

For unmatched durability in high wear applications the Semi-U blade feature:

- Hardox 400 Liner plate and side plates
- Additional reinforcements on the bottom of the blade

854K Wheel Loader Specifications

Engine (Tier 4)

Engine Model	Cat C32 with ACERT Technology	
Emissions	U.S. EPA Tier 4 Final Capable	
Rated Speed	1,750 rpm	
Gross Power – SAE J1995	676 kW	907 hp
Net Power – SAE 1349	607 kW	814 hp
Bore	145 mm	5.7 in
Stroke	162 mm	6.4 in
Displacement	32.1 L	1,959 in ³
Peak Torque @ (speed)	4242 N·m	3,129 ft-lb
Torque Rise	30%	

- Net power advertised is the power available at the flywheel when the engine is equipped with fan, air cleaner, muffler and alternator.
- Net torque rise meets SAE J139.
- No engine derating required up to 3050 m (10,000 ft) altitude.

Engine (Tier 2)

Engine Model	Cat C32 with ACERT Technology	
Emissions	U.S. EPA Tier 2 Equivalent	
Rated Speed	1,750 rpm	
Gross Power – SAE J1995	676 kW	907 hp
Net Power – SAE 1349	607 kW	814 hp
Bore	145 mm	5.7 in
Stroke	162 mm	6.4 in
Displacement	32.1 L	1,959 in ³
Peak Torque @ (speed)	4242 N·m	3,129 ft-lb
Torque Rise	30%	

- Net power advertised is the power available at the flywheel when the engine is equipped with fan, air cleaner, muffler and alternator.
- Net torque rise meets SAE J139.
- No engine derating required up to 3050 m (10,000 ft) altitude.

Weights (Tier 4)

Operating Weight	101 720 kg	224,254 lb
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Weights (Tier 2)

Operating Weight	101 164 kg	223,027 lb
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Transmission

Transmission Type	Cat Planetary Power Shift	
Converter Drive Forward 1	7.1 km/h	4.4 mph
Converter Drive Forward 2	12.4 km/h	7.7 mph
Converter Drive Forward 3	21.2 km/h	13.2 mph
Converter Drive Reverse 1	7.7 km/h	4.8 mph
Converter Drive Reverse 2	13.5 km/h	8.4 mph
Converter Drive Reverse 3	23.5 km/h	14.6 mph
Direct Drive Forward 1	Lock-up disabled	
Direct Drive Forward 2	13.0 km/h	8.1 mph
Direct Drive Forward 3	22.8 km/h	14.2 mph
Direct Drive Reverse 1	8.0 km/h	5.0 mph
Direct Drive Reverse 2	14.3 km/h	8.9 mph
Direct Drive Reverse 3	25.1 km/h	15.6 mph

- Travel speeds based on 45/65-45 L-5 46 ply tires.

Hydraulic System – Lift/Tilt

Output at 1883 rpm and 6900 kPa (1,000 psi)	460 L/min	122 gal/min
Cylinder, Double-acting: Lift, Bore and Stroke	177 mm × 1760 mm	0.58 ft × 5.8 ft
Cylinder, Double-acting: Tilt and Tip, Bore and Stroke	267 mm × 286 mm	0.88 ft × 0.94 ft
Main Relief Pressure	31 000 kPa	4,496 psi

- Blade control system with double-section vane pump with SAE No. 10 oil at 66° C (150° F)

854K Wheel Loader Specifications

Service Refill Capacities

Fuel Tank – Standard	1562 L	413 gal
Cooling System	200 L	53 gal
Crankcase	120 L	32 gal
Transmission	169 L	45 gal
Differentials and Final Drives – Front	369 L	98 gal
Differentials and Final Drives – Rear	342 L	90 gal
Hydraulic System – Implement and Brakes (Tank only)	326 L	81 gal
Hydraulic System – Steering and Engine Cooling Fan (Tank only)	290 L	77 gal

Axles

Front	Fixed	
Rear	Oscillating at ± 10 degrees	
Maximum Single-wheel Rise and Fall	573 mm	22.6 in

Brakes

Brakes	Meets ISO 3540:1996
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Cab

Air Conditioning	Standard air conditioning system contains environmentally friendly R134a refrigerant
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Cab – ROPS/FOPS	SAE J11040 APR88, ISO 3471:2008, ISO 3471:1994
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Cat cab with separate Rollover Protective Structure/Falling Object Protective Structure (ROPS/FOPS) is standard in North America, Europe and Japan.

- ROPS meets SAE J11040 APR88, ISO 3471:2008 and ISO 3471:1994 criteria.
- FOPS meets SAE J231 JAN81 and ISO 3449:1992 Level II criteria.

Sound Performance

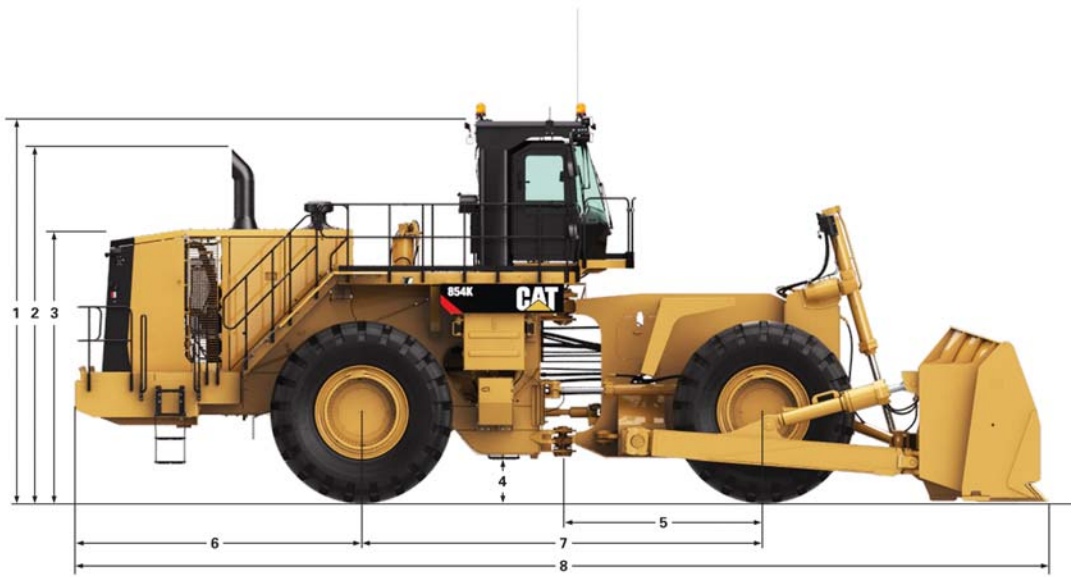
- The operator sound exposure Leq (equivalent sound pressure level) measured according to the work cycle procedures specified in ANSI/SAE J1166 FEB08 is 71 dB(A), for the cab offered by Caterpillar, when properly installed, maintained and tested with the doors and windows closed.
- Hearing protection 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.
- The 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 FEB06, mid-gear-moving operation, is 87 dB(A).
- The dynamic operator sound pressure level is 71 dB(A) when ISO 6396:2008 is used to measure the value for an enclosed cab.

Steering

Minimum Turning Radius (over bucket)	9550 mm	31 ft
Total Steering Angle	82 Degrees	
Hydraulic Output at 1,883 rpm and 6900 kPa (1,000 psi)	470 L/min	124 gal/min
Relief Valve Setting	34 500 kPa	5,004 psi

Dimensions

All dimensions are approximate.



1	Height to Top of ROPS	5590 mm	18 ft 3 in
2	Height to Top of Exhaust Pipe	5234 mm	17 ft 2 in
3	Height to Top of Hood	3984 mm	13 ft 0 in
4	Ground Clearance	691 mm	27 in
5	Center Line of Front Axle to Hitch	2945 mm	9 ft 8 in
6	Center Line of Rear Axle to Edge of Bumper	4195 mm	13 ft 9 in
7	Wheelbase	5890 mm	19 ft 3 in
8	Length with Blade on Ground	13 405 mm	44 ft 0 in

854K Standard Equipment

Standard Equipment

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

ELECTRICAL

- Alarm, back-up
- Alternator, (150-amp)
- Batteries, low maintenance
- Deutsch & Amp Seal terminal connectors
- ECM diagnostic connector
- Ground level electrical disconnect
- Ground level starting receptacle for emergency start
- Lighting system, halogen (front and rear)
- Lighting, access stairway
- Starter, electric (heavy duty)
- Starting and charging system (24-volt)

OPERATOR ENVIRONMENT

- Advisor display
- Air conditioner and heater with automatic temperature control
- Cab, sound suppressed, pressurized, rollover protective structure (ROPS/FOPS) Radio ready for (entertainment) includes antenna, speakers, and 1 x 12V converters (24-volt, 10 amp) for use with laptop/cell phone
- Cigar lighter and ashtray
- Coat hook
- Electro-hydraulic tilt and lift control system locks
- Heater and defroster
- Horn, electric
- Implement and steering lockouts
- VIMS 3G monitoring system
 - Action alert system, three category
 - Instrumentation, Gauges:
 - Engine coolant temperature
 - Fuel Level
 - Hydraulic Oil Temperature
 - Tachometer
 - Transmission Gear Indicator
 - Transmission Oil Temperature
- Light, dome (cab)
- Lunchbox and beverage holders

- Mirrors, rearview (externally mounted)
- Seat belt, retractable, 76 mm (3 in) wide operator and trainer seats
- Seat, Cat Comfort (cloth) air suspension
- STIC control system
- Tinted glass
- Wet-arm wipers/washer (front, rear, and corners), intermittent front wipers

POWER TRAIN

- Air-to-Air After cooler (ATAAC)
- Auto Idle Kickdown
- Axle oil coolers (front and rear)
- Brakes, fully hydraulic, enclosed, wet multiple disc service brakes and dry parking/secondary brake
- Case drain filters
- Delayed Engine Shutdown
- Demand fan
- Electric fuel priming pump
- Engine Cat C32 ACERT
- Ground level engine shutdown
- Ground level fast fill fuel
- Ground level transmission lockout
- Ground level starter lockout
- Idle Engine Shutdown
- Precleaner, engine air intake
- Next Generation Modular Radiator (NGMR)
- Starting aid (ether) automatic
- Throttle lock
- Transmission, 533 mm (21 in) planetary, powershift with 3F/3R, electronic control
- Venturi Exhaust Stacks

OTHER STANDARD EQUIPMENT

- Autolube
- Automatic bucket lift/tilt kickouts, electronically adjustable from cab
- Bumper service center
- Couplings, Cat O-ring face seals

- Doors, service access (locking)
- Emergency platform egress
- Fenders, steel (front and rear)
- Grouped hydraulic pressure ports
- Guards, power train and crankcase
- Hitch, drawbar with pin
- Hoses, Cat XT™ and XT-ES
- Hydraulic oil cooler
- Impeller clutch
- Implement and steering ecology drains
- Mufflers, under hood
- Oil sampling valves
- Piston pump case drain filters
- Electro-hydraulic blade controls
- Product Link™
- Service center with ground level electrical and fluids service center
- Sight gauges:
 - Coolant level
 - Implement oil level
 - Steering oil level
 - Transmission oil level
- Starter lockout, bumper
- Stairway, left and right rear access
- Steering, load sensing
- Toe kicks
- Transmission lockout, bumper
- Vandalism protection caplocks
- Windshield cleaning platforms
- 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)

Optional Equipment

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

Blades

- Semi-U – 25.4 m³ (33.1 yd³)
- HD Semi-U – 25.4 m³ (33.1 yd³)
- Coal – 44.7 m³ (58.2 yd³)

ELECTRICAL

- 10A converter
- HID lights
- Object Detection
- Rear vision camera
- LED strobe warning beacons

OPERATOR ENVIRONMENT

- AM/FM/CD/MP3 radio
- Cab precleaner
- Sirius/USB/Bluetooth Radio
- Sun Screen

STARTING AIDS

- Engine coolant 120V heater
- Engine coolant 240V heater

MACHINE CONTROL AND GUIDANCE

- CAES attachment ready option

MISCELLANEOUS ATTACHMENTS

- Arctic Antifreeze for protection to –50° C (–58° F)
- Diagnostic lines
- Rooding fenders

854K Mandatory Attachments

Mandatory Attachments

Select one from each group. Mandatory equipment may vary. Consult your Cat dealer for details.

AXLES

- Standard front and rear (NC)
- Standard front and no-spin rear

CAB

- Standard glass (NC)
- Rubber mounted glass

LIGHT ARRANGEMENTS

- Lights, standard
- Lights, HID
- Lights, LED

ELECTRONICS

- VIMS display software (NC)
(select language group)

OPERATOR SEAT

- Seat, heated
- Seat, standard (NC)

MIRROR ARRANGEMENT

- Mirror, heated
- Mirror, standard (NC)

Product Link

- Product Link-Satellite
- Product Link-Cellular

ENGINE ARRANGEMENTS

- Engine, standard (NC)
- Engine, standard, sound suppression
- Engine, brake
- Engine, brake, sound suppression

FUEL ARRANGEMENTS

- Fuel arrangement, fast fill (NC)
- Fuel arrangement, fast fill, heated
(fuel heater)

COOLING ARRANGEMENTS

- High Ambient – for ambient temperatures
55° C (131° F)
- Standard – for ambient temperatures
43° C (109° F) (NC)

STEERING AND FILTRATION SYSTEMS

- Secondary steering, deluxe filtration
- Secondary steering, standard filtration

INTEGRATED OBJECT DETECTION SYSTEM

- Camera, rear vision
- Detection, Object (Radar)

OPERATION AND

MAINTENANCE MANUAL (NC)

- English version
- French version
- German version
- Greek version
- Hebrew version
- Italian version
- Japanese version
- Norwegian version
- Portuguese version
- Russian version
- Spanish version
- Swedish version
- Thai version
- Turkish version

TIRES

- Consult your Cat dealer for current options

PRODUCT LINK

- Required for NACD, LACD, Europe,
Turkey, Australia, and New Zealand

For more complete information on Cat products, dealer services,
and industry solutions, visit us on the web at **www.cat.com**

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Featured machines in photos may include additional equipment.
See your Cat dealer for available options.

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