

986H

Block Handler



Engine

Engine Model	Cat® C15 ACERT™	
Gross Power – SAE J1995	335 kW	449 hp
Net Power – ISO 9249	305 kW	409 hp

Operating Specifications

Operating Weight	48 429 kg	106,768 lb
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Lower your operating cost with built-in durability.



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Cat Large Wheel Loaders 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.

The 986H builds upon this legacy of durability, performance, safety, operator comfort, serviceability and sustainability.



Structures

Best built for the toughest conditions.



Lift Arms

Your key to maximum uptime and productivity is our field-proven lift arms.

- Excellent visibility to the bucket edges and work area through a Z-bar design.
- High load stresses are absorbed by the solid steel lift arms.
- Enhance strength in key pin areas through the use of one piece castings.



Robust Structures

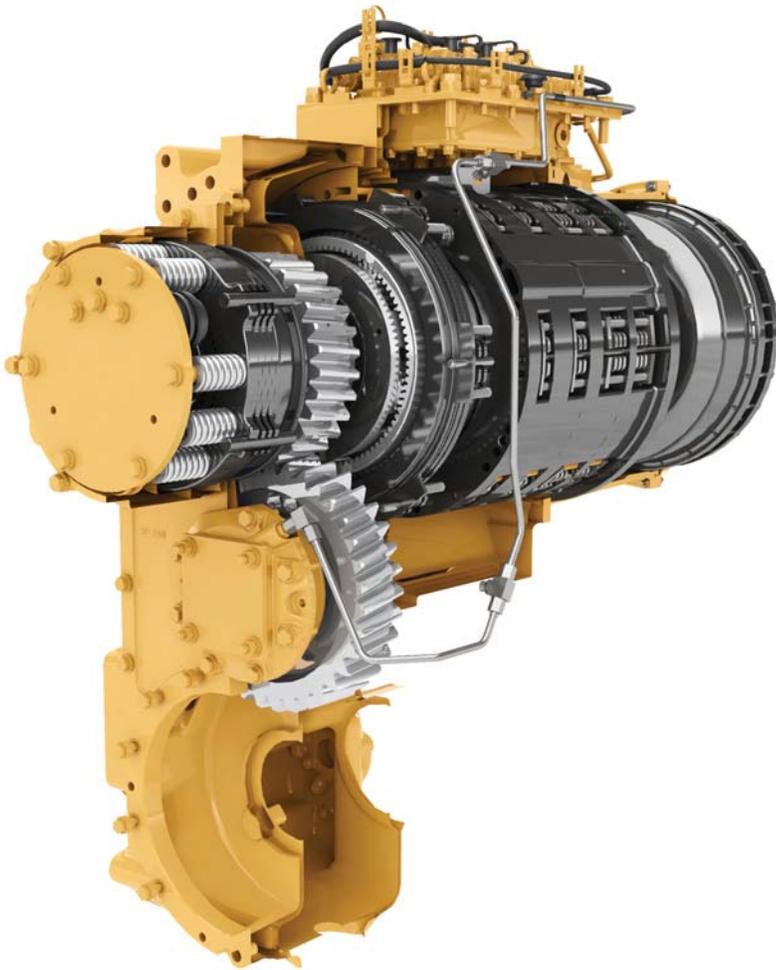
Your bottom line is improved by highly durable structures that achieve multiple life cycles and withstand the toughest loading conditions.

- Full box-section rear frame resists torsional shock and twisting forces.
- Heavy-duty steering cylinder mounts efficiently transmit loads into the frame.
- Cast axle pivot mounting areas better disperse stress loads for increased structural integrity.



Front Linkage

To ensure long life and reliability, the linkage pin joints feature a greased pin design with optional auto lube system.



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.
- Heat treated gears and shafts extend component life and maximize reliability.
- Four forward and three reverse speeds to match your application.

Cat C15 ACERT Engine

Durability and efficiency at the heart of your 986H comes from the Cat C15 ACERT engine. Optimum performance is built in to this 6 cylinder turbocharged engine.

- Mechanically Actuated Electronic Unit Injection (MEUI™) controls injection pressure over the entire engine operating range. This gives the C15 complete control over injection timing, duration and pressure.
- Extended engine life through Cat components with proven reliability.
- The Advanced Diesel Engine Management (ADEM™) A4 electronic control module manages fuel delivery to optimize performance and provide quick engine response.





Power Train

Move material more efficiently with improved power and control.

Transmission Neutralizer Pedal

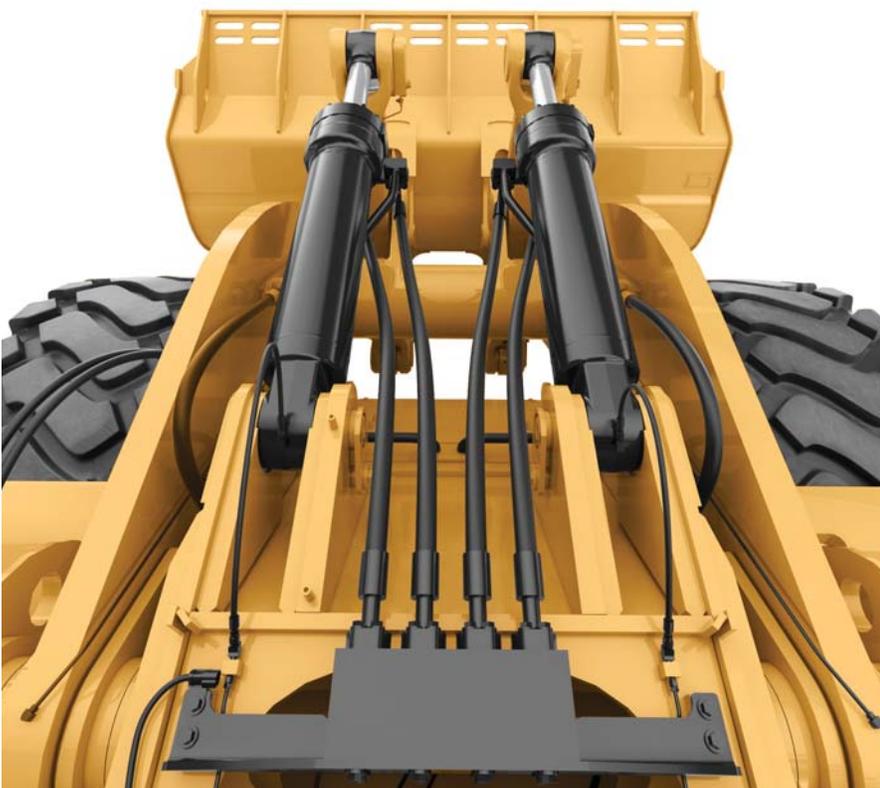
- Extends service brake life by neutralizing transmission as service brakes are applied.
- Allows full power to implement system while the machine is stationary during truck loading.

- ② **Set Point for Neutralization** – Start of service brake pressure modulation
- ③ **Full Pedal Travel** – Maximum brake pressure



Hydraulics

Productivity enabling you to move more and make more.



Load Sense Hydraulics

Increase efficiency through our Load Sense Hydraulic System. Load sense hydraulics maximize performance by directing hydraulic fluid flow through implement and steering system only when needed.

- Lowered fuel consumption.
- Consistent performance and efficiency with lower system heat.



Simple, Intuitive Operator Interface

Operators will be productive right away with our easy-to-use operator interface.

- Comfortable soft detent implement controls.
- Low effort, responsive steering wheel.
- Easy-to-use, in-cab programmable lift kickout allows the operator to pre set linkage positions and achieve faster cycle times.

3rd Valve Hydraulic Control

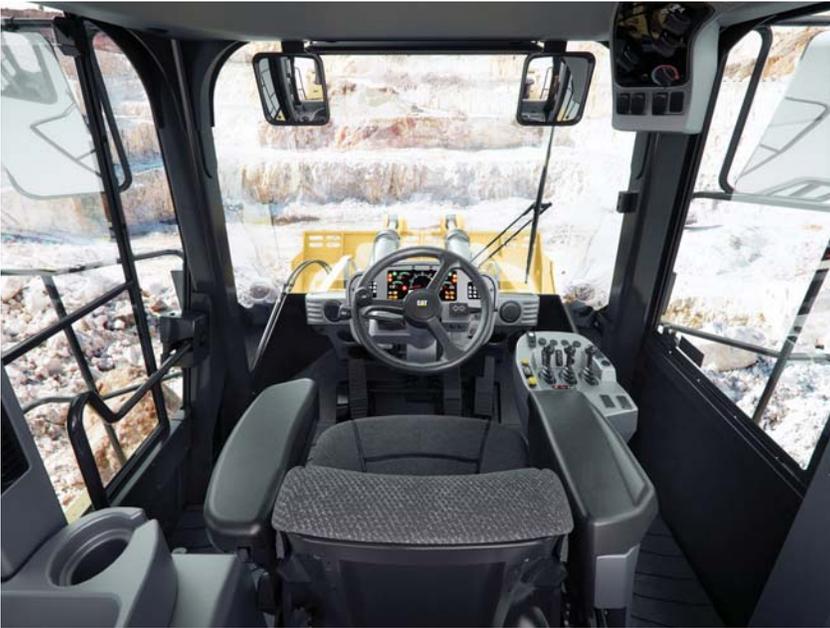
- Provides versatility through the ability to control a specialized attachment.

Filtration System

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

- Implement system filter.
- Power train oil filter.





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.

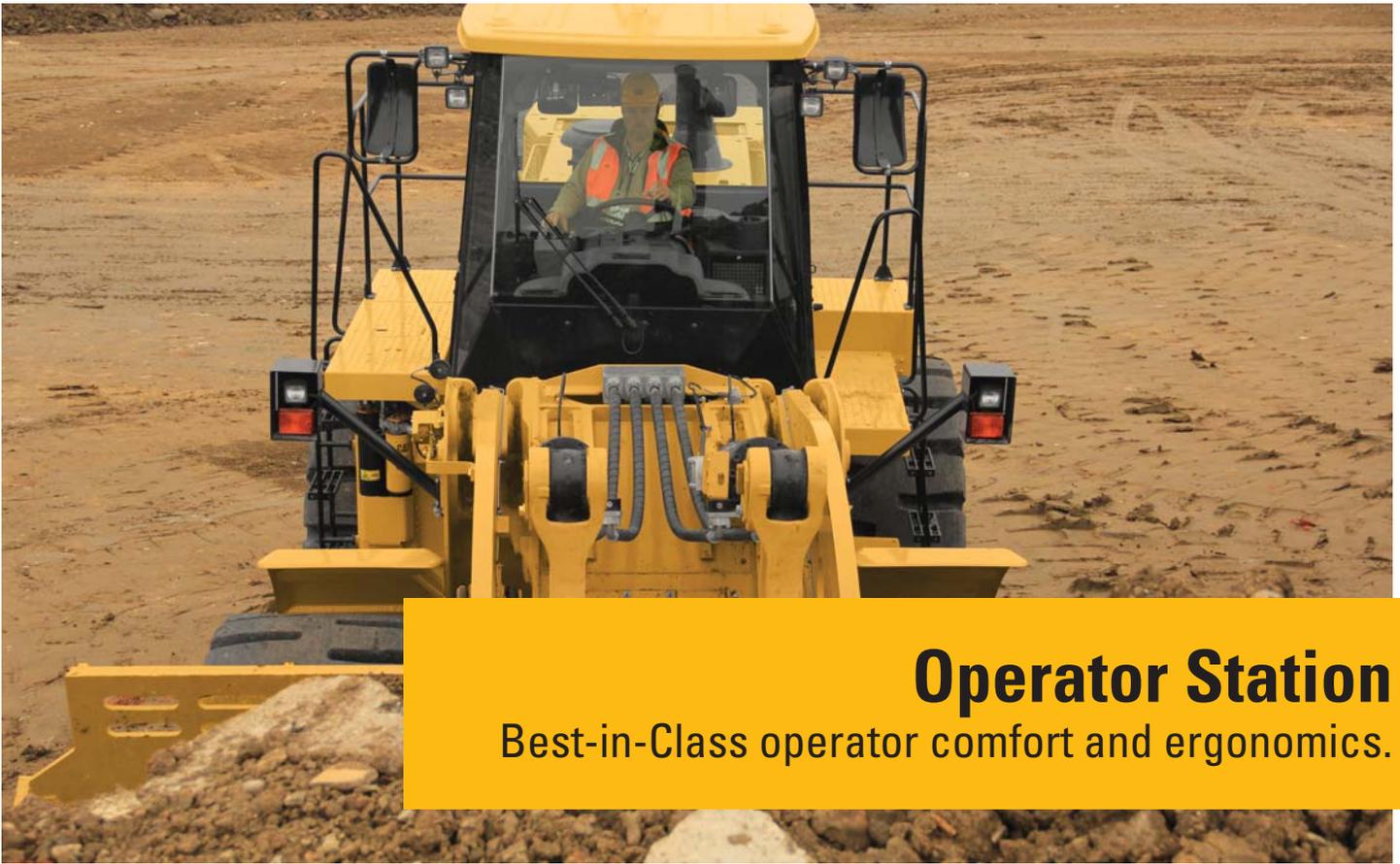
- Punch stamped tread plates provide excellent footing.
- Spacious cab provides ample space for comfortable entry and exit.
- Angled access ladder.

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 that moves with the seat.
- Optional heated seat for cold weather applications.





Operator Station

Best-in-Class operator comfort and ergonomics.

Environment

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

- Pressurized cab with filtered air.



Technology Solutions

Greater productivity through Integrated Electronic Systems.



Optional Rearview Camera

Cat Work Area Vision System (WAVS) enhances visibility around the job site through the use of a rearview camera. A camera mounted at the rear of the machine provides the input to the monitor display mounted in the front right corner of the cab, within the operators field of vision.



Cat Monitoring System

This includes a digital readout for gear selection and ground speed as well as gauge displays for:

- Fuel tank level.
- Engine and steering oil pressures.
- Engine coolant temperature.
- Torque converter and hydraulic oil temperature.
- Engine inlet air temperature.



Safety

Making your safety our priority.

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

- Walkways with non-skid surfaces 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.
- Angled access ladder and strategically placed grab handles provide safe access and egress for the operator.



Operator Environment

- Low interior sound levels.
- Cab mounted LED warning beacon.
- Optional heated seat.
- Optional HID lights provide excellent workspace visibility.
- Full Roll Over Protection System (ROPS) integrated into cab design.

Serviceability

Enabling high uptime by reducing your service time.



We can help you succeed by ensuring your 986H 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.
- Centralized, ground level grease points for injecting grease into linkage pin joints.
- Centralized remote pressure taps for power train components.
- Ground electrical service center with emergency engine shutdown switch, battery disconnect switch and circuit breakers.



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 986H'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.
- 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.

Counterweight

The 986H Block Handler delivers stability and durability with an optimized counterweight for block handling applications.

Quick Coupler Activation

The Block Handler includes an additional hydraulic valve with the Quick Coupler, allowing the operator to switch work tools and immediately lock the work tool during load and carry applications.

Larger Tilt Cylinders

The 986H Block Handler comes equipped with larger tilt cylinders on the linkage that help improve load control and ensure safe and long lasting operation.

Ride Control

Ride control works by using an accumulator to dampen the linkage motion, acting as a shock absorber. It provides the operator with a smoother ride over rough terrain, enabling a more comfortable ride at higher speeds.

Block Handler Front Linkage

The 986H Block Handler linkage is designed specifically for block handling applications. The linkage layout maximizes machine stability by keeping the payload close to the front tires and pin locations are designed to optimize performance with a quick coupler and fork.



Designed for Block Handling

Unique features for block handling applications.



Optimized Z-bar Linkage

- Linkage layout designed to maximize lift capability in block handling application.
- High load stresses are absorbed by solid steel lift arms.
- Enhanced strength in key pin areas through the use of one piece castings.
- Stress released lift arms increase durability and lengthen time to repair.

986H Block Handler Specifications

Engine

Engine Model	Cat C15 ACERT	
Emissions	Tier 2	
Rated Speed	1,800 rpm	
SAE J1995 at Rated Speed	335 kW	449 hp
ISO 14396 at Rated Speed	329 kW	441 hp
EEC 80/1269	305 kW	409 hp
ISO 9249 at Rated Speed (assumes standard ambient fan)	305 kW	409 hp
SAE 1349 at Rated Speed (assumes standard ambient fan)	305 kW	409 hp
Bore	137 mm	5.4 in
Stroke	171.5 mm	6.75 in
Displacement	15.2 L	927 in ³
Peak Torque @ 1,200 rpm	2320 N•m	1,711 lb ft
Torque Rise	37%	

Operating Specifications

Operating Weight	48 429 kg	106,768 lb
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Transmission

Transmission Type	Cat planetary power shift	
Forward 1	7.3 km/h	5 mph
Forward 2	12.2 km/h	8 mph
Direct Drive – Forward 2	12.7 km/h	8 mph
Direct Drive – Forward 3	22 km/h	14 mph
Direct Drive – Forward 4	39 km/h	24 mph
Reverse 1	7.6 km/h	5 mph
Reverse 2	13.6 km/h	8 mph
Direct Drive – Reverse 2	14.1 km/h	9 mph
Direct Drive – Reverse 3	25 km/h	16 mph

• Travel speeds based on R35/65-33 tires.

Hydraulic System – Lift/Tilt

Lift/Tilt System – Circuit	Load Sense	
Lift/Tilt System Pumps	2 × 110 cc variable displacement	
Maximum Flow at 2,165 rpm	470 L/min	123 gal/min
Relief Valve Setting – Lift/Tilt	27 900 kPa	4,050 psi
Lift Cylinder – Bore	190 mm	7.5 in
Lift Cylinder – Stroke	1138 mm	45 in
Tilt Cylinder – Bore	190 mm	7.5 in
Tilt Cylinder – Stroke	568 mm	22.4 in

Hydraulic Cycle Time

Rackback	4.5 Seconds
Raise	8.5 Seconds
Dump	3 Seconds
Lower	4.9 Seconds
Lower Float Down	4.3 Seconds
Total Hydraulic Cycle Time	15.8 Seconds

Service Refill Capacities

Fuel Tank	481 L	127 gal
Cooling Systems	90 L	24 gal
Crankcase	34 L	9 gal
Transmission	75 L	20 gal
Axle Oil	356 L	94 gal
Differentials and Final Drives – Front	186 L	49 gal
Differentials and Final Drives – Rear	170 L	45 gal
Hydraulic System Factory Fill	330 L	87 gal
Hydraulic System (tank only)	125 L	33 gal

Axles

Front	Fixed
Rear	Trunnion
Oscillation Angle	±12.5°

Brakes

Brakes	SAE J1473 OCT90, ISO 3450:1992
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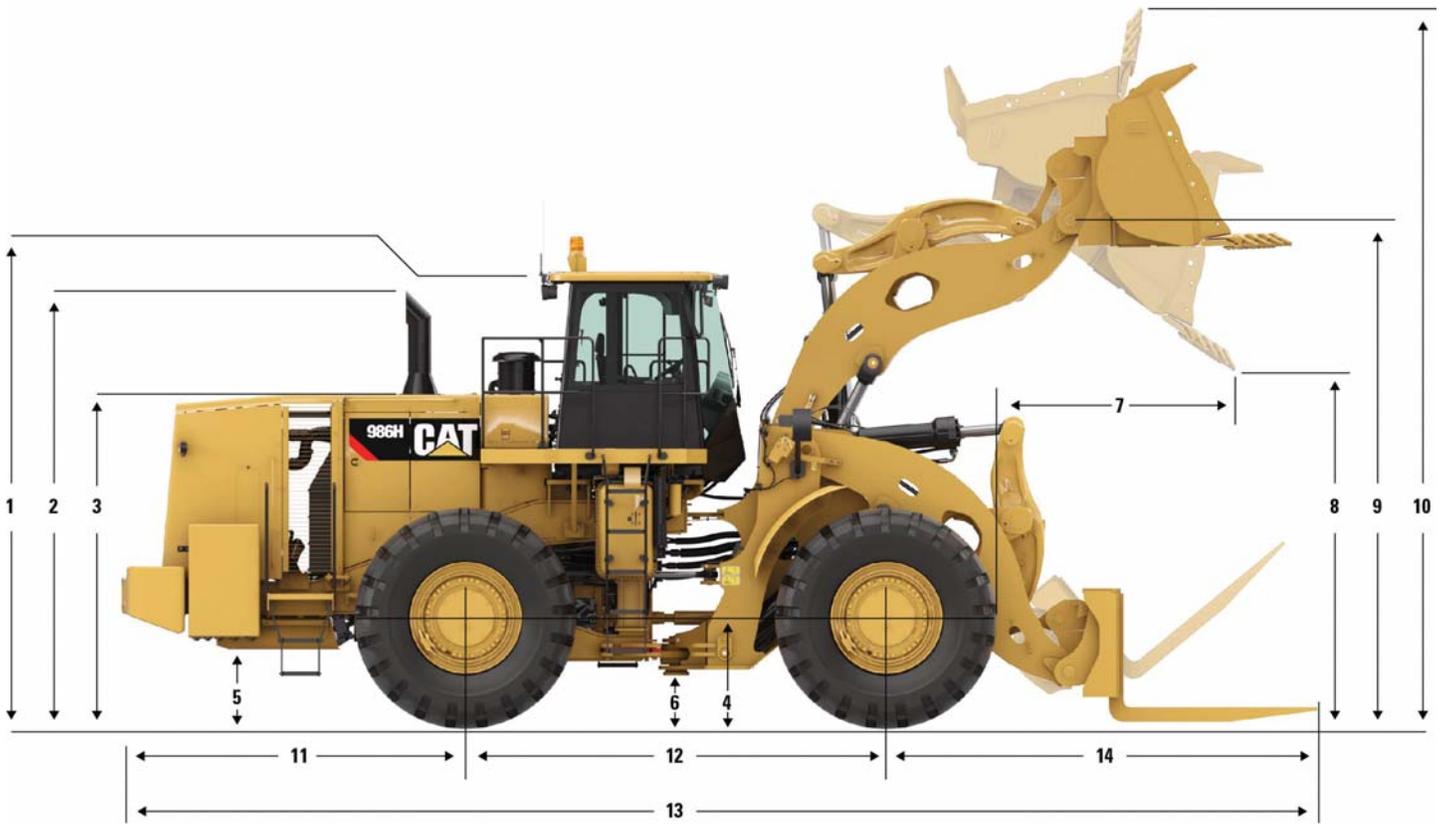
Hydraulic System – Steering

Steering System – Circuit	Load Sense	
Steering System – Pump	Piston, variable displacement	
Maximum Flow @ 2,284 rpm	200 L/min	52 gal/min
Steering Cutoff Pressure	27 600 kPa	4,000 psi
Total Steering Angle	70 degrees	

986H Block Handler Specifications

Dimensions

All dimensions are approximate.

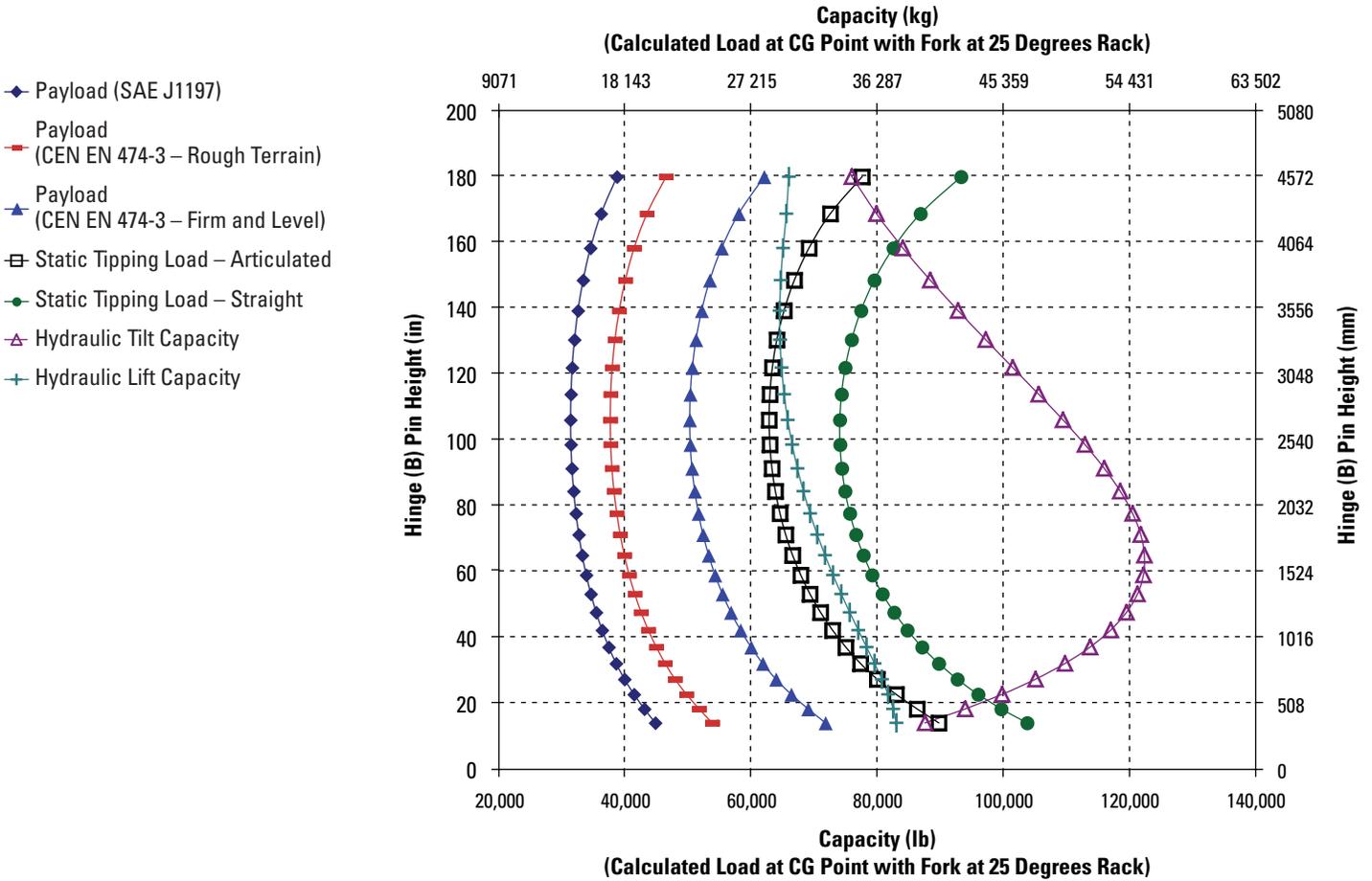


	Quick Coupler and 6.1 m ³ (8.0 yd ³) Bucket		Quick Coupler and Fork	
1 Ground to Top of ROPS	4110 mm	13.5 ft	4110 mm	13.5 ft
2 Ground to Top of Exhaust Stacks	3940 mm	12.9 ft	3940 mm	12.9 ft
3 Ground to Top of Hood	2991 mm	9.8 ft	2991 mm	9.8 ft
4 Ground to Center of Rear Axle	978 mm	3.2 ft	978 mm	3.2 ft
5 Ground to Fuel Tank Clearance	691 mm	2.3 ft	691 mm	2.3 ft
6 Ground to Lower Hitch Clearance	459 mm	1.5 ft	459 mm	1.5 ft
7 Reach at Maximum Lift	2437 mm	8.0 ft	—	—
8 Clearance at Maximum Lift	3259 mm	10.7 ft	—	—
9 B-Pin Height at Maximum Lift	4566 mm	15.0 ft	4566 mm	15.0 ft
10 Maximum Overall Height, Bucket Raised	6359 mm	20.9 ft	—	—
11 Rear Axle Center Line to Bumper	3132 mm	10.3 ft	3132 mm	10.3 ft
12 Wheel Base	3810 mm	12.5 ft	3810 mm	12.5 ft
13 Maximum Overall Length	10 671 mm	35.0 ft	10 776 mm	35.4 ft
14 Front Axle Centerline to Bucket Tip	3729 mm	12.2 ft	3834 mm	12.6 ft

986H Block Handler Specifications

Load Capacity Curves

L5 Tires, Fork at 25 degree Rack Angle, 1795 mm (71") Tine, Block Handler Quick Coupler and Block Handler Fork.



NOTE:

Static tipping loads and operating weight are based on the following loader configuration: L5 Bridgestone bias tires, air conditioning, ride control, power train guard, full fluids, fuel tank, coolant, lubricants, and operator.

Specifications and ratings conform to the following standards: SAE* J1197, SAE J732, CEN** EN 474-3.

The rated operating load for a loader equipped with a pallet fork is determined by:

SAE J1197: 50% of full turn static tipping load or hydraulic limit.

CEN EN 474-3: 60% of full turn static tipping load on rough terrain or hydraulic limit.

CEN EN 474-3: 80% of full turn static tipping load on firm and level ground or hydraulic limit.

*SAE – Society of Automotive Engineers

**CEN – European Committee for Standardization

Operating Specifications

Tires: 35/65-33 SLR: 978 mm (3.2 ft)

Bucket Type		Bucket	Fork
Ground Engaging Tools		Teeth & Segments	
Cutting Edge Type		Spade	
Bucket Part No.		457-8930	418-0070
Struck Capacity	m ³	4.4	
	yd ³	5.8	
Heaped Capacity (rated)	m ³	5.4	
	yd ³	7.0	
Bucket Width	mm	3812	
	ft	12.5	
Dump Clearance at Full Lift and Full Dump Angle (segment)	mm	3355	
	ft	11.0	
Dump Clearance at Full Lift and Full Dump Angle (with teeth)	mm	3259	
	ft	10.7	
Reach at Lift and Full Dump Angle (segment)	mm	2261	
	ft	7.4	
Reach at Lift and Full Dump Angle (with teeth)	mm	2438	
	ft	8.0	
Reach with Lift Arms Horizontal and Bucket Level (teeth)	mm	3518	
	ft	11.5	
Digging Depth (segment)	mm	103	
	in	4	
Overall Length (bucket ground level)	mm	10 671	10 776
	ft	35.0	35.4
Overall Height with Bucket at Full Raise	mm	6359	
	ft	20.9	
Loader Clearance Turning Radius (SAE carry)	mm	8628	7736
	ft	28.3	25.4
Full Dump Angle	deg	-27	
Static Tipping Load Straight (rigid tire)	kg	35 363	34 398
	lb	77,962	75,835
Static Tipping Load Straight (tire squash)	kg	34 406	33 595
	lb	75,852	74,064
Static Tipping Load – Full Turn (articulated 35°) (rigid tire)	kg	31 146	30 534
	lb	68,665	67,316
Static Tipping Load – Full Turn (articulated 35°) (tire squash)	kg	29 005	28 793
	lb	63,945	63,478
Breakout Force	kN	338	
	lbf	75,985	
Operating Weight	kg	50 671	48 429
	lb	111,710	106,768
Weight Distribution at SAE Carry (unloaded) – Front	kg	20 941	17 320
	lb	46,167	38,184
Weight Distribution at SAE Carry (unloaded) – Rear	kg	29 730	31 109
	lb	65,543	68,584

Bridgestone 42 PR bias tires with 6.6 bar (95 psi) pressure.
25 degree fork angle for tipping loads with 418-0070 forks.

986H Standard Equipment

Standard Equipment

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

ELECTRICAL

- Alarm, back-up
- Alternator, 115 amp
- Batteries, dry
- Battery disconnect switch
- Converter, 10/15 amp, 24V to 12V
- Lighting system (halogen, work lights)

OPERATOR ENVIRONMENT

- Air conditioner
- Cab, sound suppressed and pressurized
- Cigar lighter, ashtray
- Controls, lift and tilt function
- Heater, defroster
- Horn
- Instrumentation, gauges
 - Coolant temperature
 - Engine hour meter
 - Hydraulic oil temperature
 - Power train oil temperature
- Light, cab, dome
- Lunchbox, beverage holders
- Mirrors, rearview (externally mounted)
- Seat, Cat Comfort (cloth), air suspension, six-way adjustable
- Seat belt, retractable
- Tinted glass
- Transmission gear indicator
- Wet-Arm wipers/washers (front and rear)
 - Intermittent front and rear wipers

POWER TRAIN

- Brakes, oil-cooled, multi-disc, service/secondary
- Driveline parking brake
- Engine, C15 ACERT diesel, turbocharged/aftercooled
- Fuel priming pump (electric)
- Ground level engine shutoff
- Precleaner, engine air intake (above hood)
- Radiator
- Torque converter with LUC
- Transmission, planetary powershift, 4F/3R electronic control

OTHER

- Doors, service access (locking)
- Fuel tank
- Hitch, drawbar with pin
- Hoses, Cat XT
- Hydraulic, steering and brake filtration/screening system
- Mufflers
- Oil sampling valves
- Premixed 50% concentration of extended life coolant with freeze protection to -34°C (-29°F)
- Steering, load sensing

986H Optional Equipment and Mandatory Attachments

Optional Equipment

With approximate changes in operating weights. Optional equipment may vary. Consult your Cat dealer for specifics.

ELECTRICAL

- Batteries – additional

OPERATOR ENVIRONMENT

- AM/FM/CD radio
- Rearview camera (WAVS)
- LED strobe warning beacon
- Radio ready

Mandatory Attachments

Select one from each group. Mandatory and optional equipment may vary. Consult your Cat dealer for specifics.

LINKAGE

- Autolube
- Manual grease pins

ELECTRICAL

- No Product Link™
- Product Link (Satellite)
- Product Link (Cellular)

STEERING

- Standard steering
- Secondary steering

POWER TRAIN

- Axle oil cooler
- Standard axles

LIGHTING

- Standard lighting (4 floods)
- Deluxe lighting (9 floods)
- HID lighting (4 floods, 4 HIDs)

OPERATOR ENVIRONMENT

- Standard seat
- Heated seat

HYDRAULICS

- Ride Control
- No Ride Control
- Two function hydraulic system (standard lift/tilt)
- Three function hydraulic system (one auxiliary function)

FUEL SYSTEM

- Cold weather starting package
- Conventional fuel arrangement

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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Materials and specifications are subject to change without notice. Featured machines in photos may include additional equipment. See your Cat dealer for available options.

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