

# 966F

Series II  
Wheel Loader



Bucket capacities	3.3 to 3.8 m <sup>3</sup>	4.25 to 5.0 yd <sup>3</sup>
Operating weight	20 905 kg	46,096 lb
Cat 3306 Engine		
Gross power	175 kW	235 HP
Flywheel power	164 kW	220 HP

## 966F Series II Wheel Loader

*State-of-the-art design and superior quality allow you to maximize productivity.*

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### Engine

Cat 3306 engine is built for performance, durability, serviceability and excellent fuel economy. **pg. 4**

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### Power Train

Automatic planetary power shift transmission allows for on-the-go speed and direction changes, while heavy duty axles with enclosed full-hydraulic disc brakes are designed to provide optimum performance in all kinds of applications and operating environments. **pg. 5**

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### Frame and Loader Linkage

Box-section frame and four-plate loader tower absorb shock and reduce stress. Spread hitch design provides strength, allows excellent service access and reduces stress loads on hitch pins and roller bearings. Low maintenance Z-bar design provides optimum breakout forces. **pg. 6**

### *Top performance.*

*Caterpillar high-tech design provides tough breakout force, fast load and cycle times, and precise maneuvering.*

### *Reliable, durable operation.*

*Rugged construction and easy maintenance guarantee long life with low operating costs.*



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### Hydraulics

Powerful Caterpillar hydraulics provide strength and versatility for various applications, giving the 966F Series II exceptional lift capacity and load handling. Hydraulics are also the key to automotive-like steering and ride control. **pg. 7**

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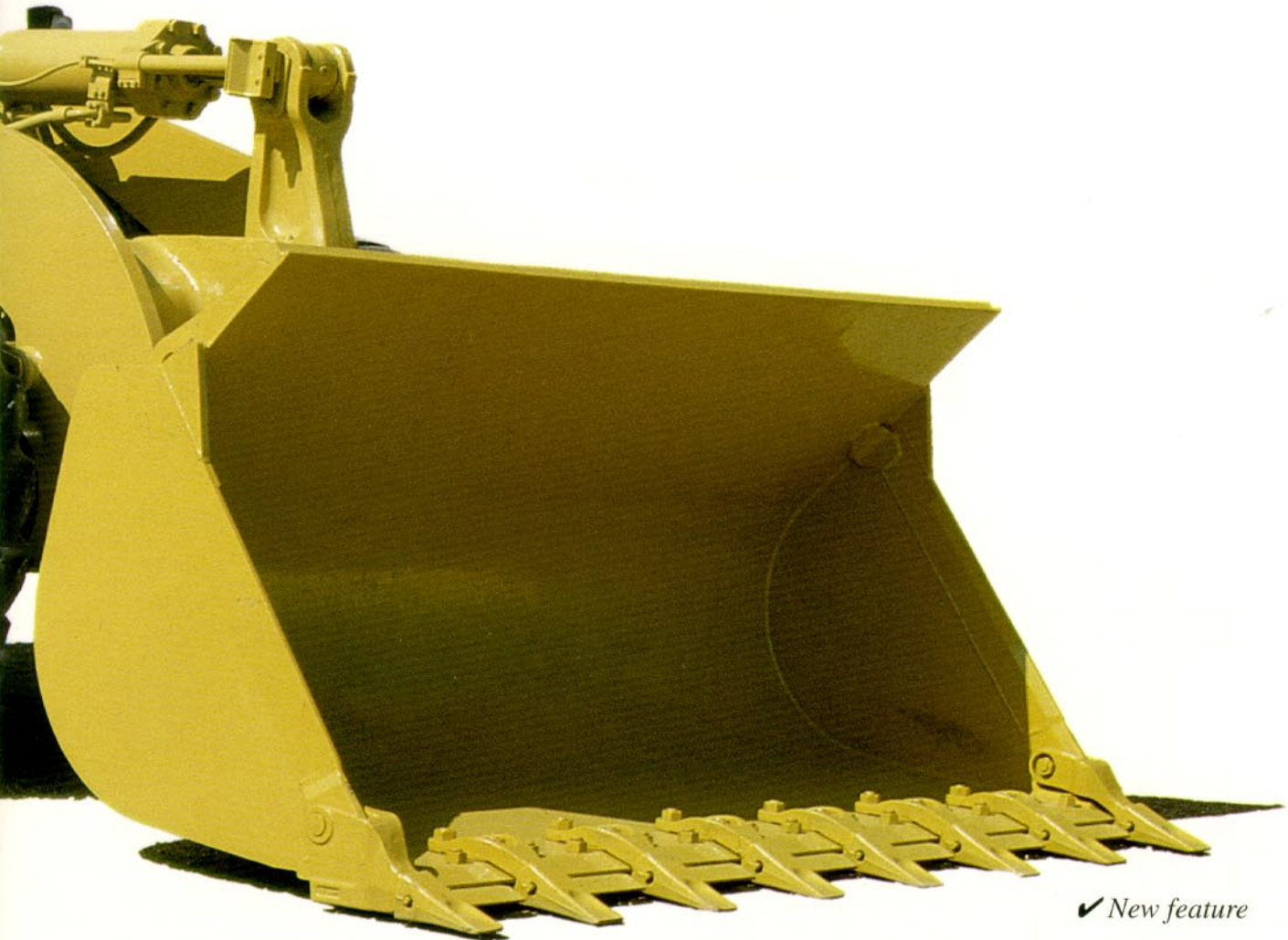
### Operator's Station

In the roomier new cab, thoughtfully positioned levers and switches put the operator in control, while the automatic shift simplifies the work. *The Computerized Monitoring System features a Vacuum Fluorescent Display for excellent readability.* Low closed-door sound levels (75 dB(A) when measured per ISO 6394 or 86/662/EEC) reduce operator fatigue on cab equipped machines. **pg. 8-9**

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### Buckets

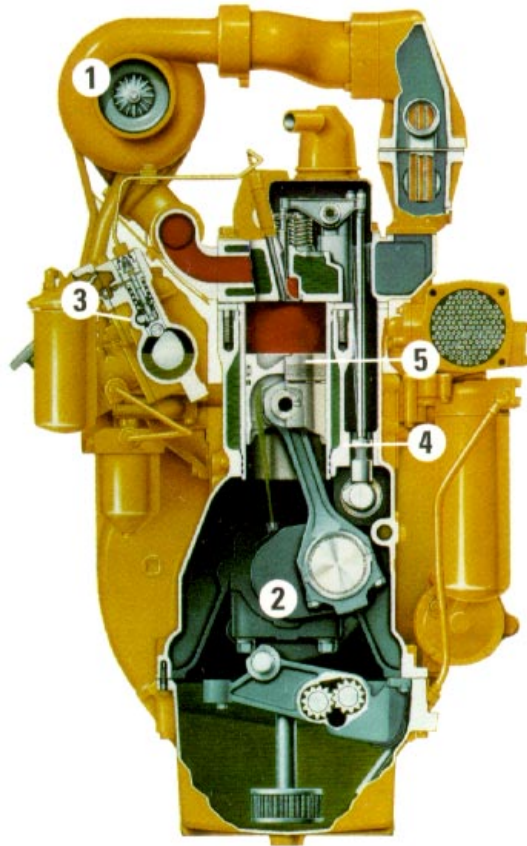
Wide selection of general purpose, penetration and rock buckets—along with various tooth and tip options—allow you to match the machine to the job. **pg. 10-11**



✓ *New feature*

## 3306 Engine

*The six-cylinder, turbocharged engine is built for power, reliability and economy.*



**Powerful performance.** The 966F Series II performs at full-rated gross power of 175 kW (235 hp). The four-stroke cycle design delivers long power strokes and efficient fuel combustion. The turbocharged Caterpillar 3306 engine is precisely engineered and stringently tested to maintain a tradition of quality. It does it all with profit-boosting performance, heavy duty durability and reliability, built-in serviceability and excellent fuel economy.

**1 Turbocharger** enhances performance and engine efficiency, especially at high altitudes.

**2 Crankshaft** is a steel forging, carburized and quench hardened for long-term durability.

**3 High-pressure direct injection fuel system** provides excellent fuel atomization for unmatched fuel economy, reliability and durability.

**4 Full-length water cooled cylinder liners** provide maximum heat transfer.

**5 Oil-cooled pistons** increase heat dissipation and promote longer piston life.

**Modular radiator** cools efficiently. Grill swings out for easy repair or installation of individual modules and sight gauge allows for quick check of coolant level. Optional trash resistant radiator with 6 fins per inch is available.

**Easy maintenance.** The engine can be rebuilt for a second life. Caterpillar remanufactured parts are available to economically replace many components. Some innovative maintenance features of the 3306 engine:

- Connecting rods can be removed through the tops of the cylinders.
- Camshaft followers and pushrods can be easily replaced without removing the camshaft.
- Water pump can be serviced as a unit or rebuilt.

## Power Train

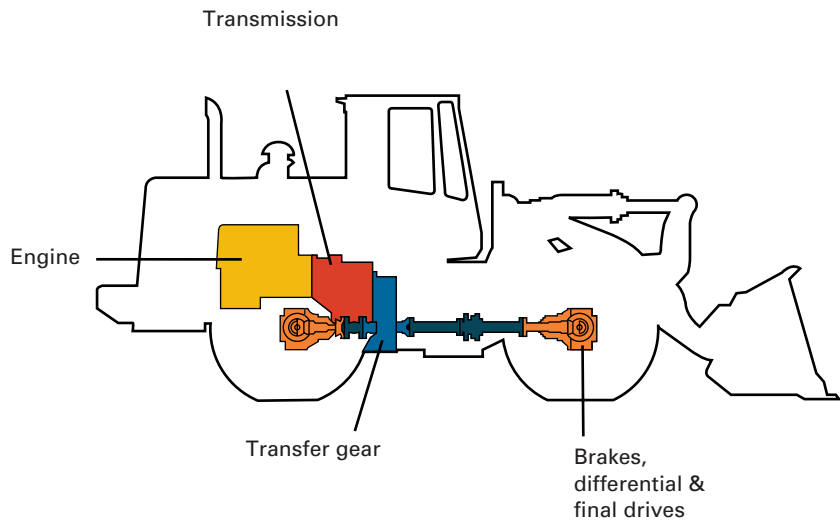
The Cat® power train makes dependable performance a standard feature.



**1 Heavy duty axles and brakes** are designed to last in all kinds of operating conditions. Planetary final drives use full-floating bronze sleeve bearings in the planet gears and differential pinion. Full-hydraulic wet disc brakes are adjustment free and fully enclosed to lock out contaminants. Patented Duo-Cone Seals between the axle shafts and housings keep lubrication in and dirt out. Oscillating rear axle ensures four-wheel ground contact for traction and stability, even on rugged terrain.

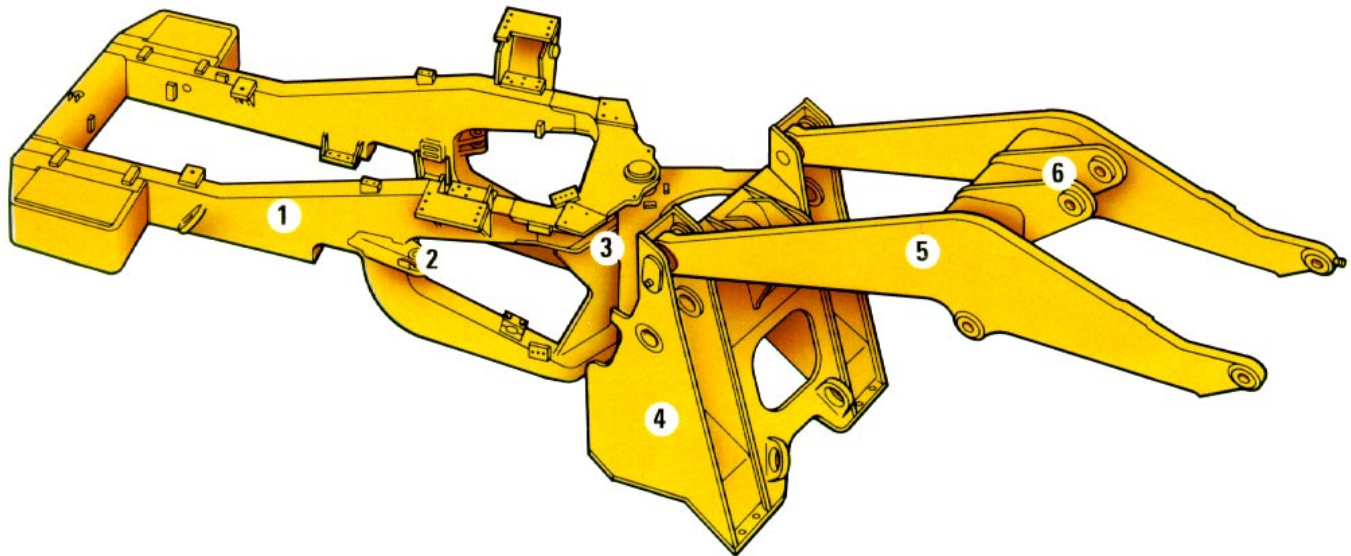
**2 Optional limited-slip differentials and NoSPIN rear differential** are available to deliver maximum traction in low traction or inconsistent ground conditions.

**Planetary power shift transmission with automatic shift capability** allows on-the-go shifting, while hydraulic modulation cushions the shift and reduces stress on components. Large diameter, perimeter-mounted clutch plates are continuously oil-cooled for dependable, long life.



# Frame and Loader Linkage

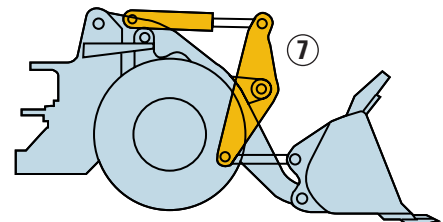
*Superior construction means superior strength.*



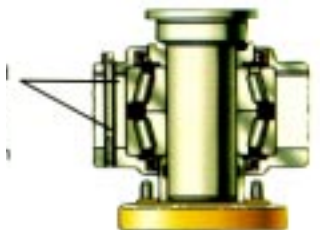
- 1 Full box-section frame** absorbs shock and twisting forces while supporting rigid component alignment.
- 2 Spread-hitch design** provides strength in the articulation area and reduces stress on the hitch pins and roller bearings. The use of castings in high stress areas distributes stress loads better.
- 3 35° center-point articulation** allows cycling in tight quarters.
- 4 Full four-plate loader tower** provides rigid mounting for lift arms, resists stress and protects hydraulic cylinders and lines from damage by debris.
- 5 Lift arms** are made of solid steel to stand up to any stress load.

- 6 Cast cross tube** provides extra rigidity and maintains pin bore alignment.
- 7 Z-bar loader linkage** gives the 966F Series II tremendous breakout force in all materials. The streamlined design—with fewer pivot points and sealing to maintain pin lubrication—allows for longer maintenance intervals. Cast tilt lever and forged tilt link efficiently transmit high breakout forces from the tilt cylinder.

**Optional high lift design.** An arrangement with longer lift arms and modified tilt cylinder is available for increased reach and dump clearance.

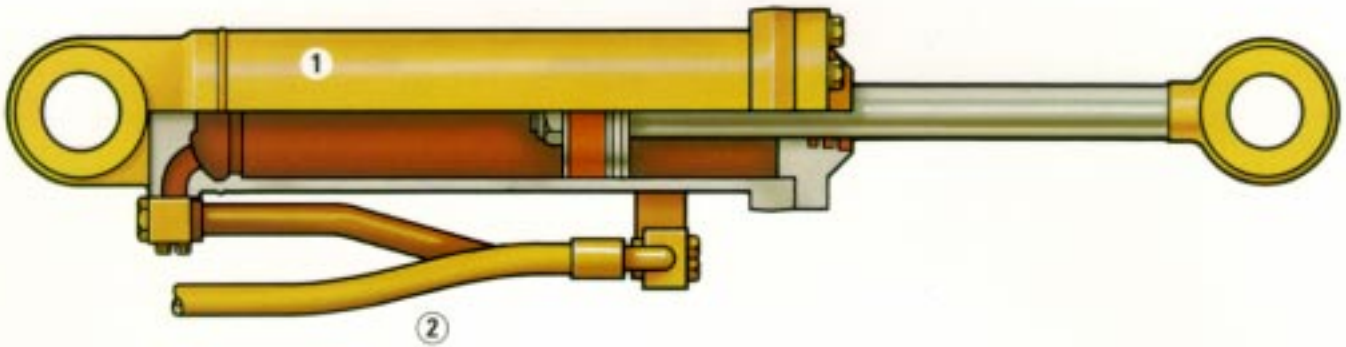


Double tapered roller bearings on both upper and lower hitch



# Hydraulics

*Powerful hydraulics are the invisible force behind the loader's muscle and flexibility.*



**High capacity lift.** Quick hydraulics make it easy to lift heavy, full bucket loads. The bucket automatically returns to a preset lift height and digging angle, which ensures accuracy and cuts down on operator distractions.

**Smooth steering.** Hydraulic steering system with dedicated pump has automotive-type feel for precise, comfortable control. Large-bore steering cylinders allow excellent maneuverability.

**Automatic Ride Control.** The 966F features an optional automatic ride control system that uses a nitrogen-oil accumulator in line with hydraulic lift cylinders as a shock absorber. In automatic, the system is activated when the speed exceeds 9.7 kph (6mph) and deactivated at speeds below 9.7 kph (6 mph), resulting in better movement into the stockpile, more efficient lifting and loading. Automatic ride control also provides a more controlled ride and greater payload retention. Collectively these benefits contribute to improved operator efficiency, lower operating cost and enhanced productivity.

**1 Large-bore lift and tilt cylinders** ensure efficient load handling.

**2 Cat's XT-3 hydraulic hose** is exceptionally strong and flexible. Reusable couplings prolong the hose assembly's life.

**O-Ring Face Seals (ORFS)** provide positive, dry sealing.

## Operator's Station

*Comfort and control – top-quality operator's station will help maximize productivity.*







**1 Exceptional all-around visibility**

reduces strain and fatigue, making operators more productive.

**2 Caterpillar Monitoring System** with electronic analog gauges is a highly effective and reliable diagnostic system. As a warning system, it constantly checks machine functions and tells the operator when there's a problem. Easy-to-read gauges display fuel level, temperatures for coolant, transmission and hydraulic oil, alternator output, machine speed, engine RPM and gear range. Also displays hour meter, odometer and optional digital speedometer readings. As a diagnostic system, it identifies conditions, shows current readings and plays back readings registered during recent operations.

**3 Automatic shift control** allows the operator to concentrate on the work, not gear selection. Preset factory shift points ensure each shift occurs at optimum torque. A switch allows the operator to select either automatic or manual shifting. The low-effort shift control allows one-hand shifting for speed or directional changes.

**4 Quick Gear Kickdown Button** lets the operator easily downshift to a lower gear. It's a convenient way to downshift that saves time, increases bucket fill factors and lowers cycle times.

**5 Steering column** adjusts to multiple positions. The leather-like steering wheel and transmission control provide a sure grip and comfortable feel. The horn is conveniently located in the center of the steering wheel.

**6 Transmission neutralizer lockout**

**switch** enables the left or right brake pedal to be used as a brake/neutralizer or brake only. Switch is on the right hand console.

**7 Convenient low effort bucket controls**

allow for precise bucket loading and dumping. Optional third valve and control are available.

**8 New Contour Series Seat**

is designed for comfort and support. Seat cushions reduce pressure on the lower back and thighs while allowing unrestricted arm and leg movement.

**9 Built-in storage space**

is designed to hold cups, lunch box, thermos and personal items.

**10 Repositioned vents**

throughout the cab keep fresh air flowing while improving the cab's heating, cooling, defrost and defog capability.

**Radio Ready**

means this cab includes 12-volt converter (2-amp), speakers, antenna, all wiring and brackets for entertainment or communications radio installation.

**Windshield washers/wipers**

are standard features on front and rear windows. Front wiper has intermittent speed capability and in-the-blade washer delivery system.

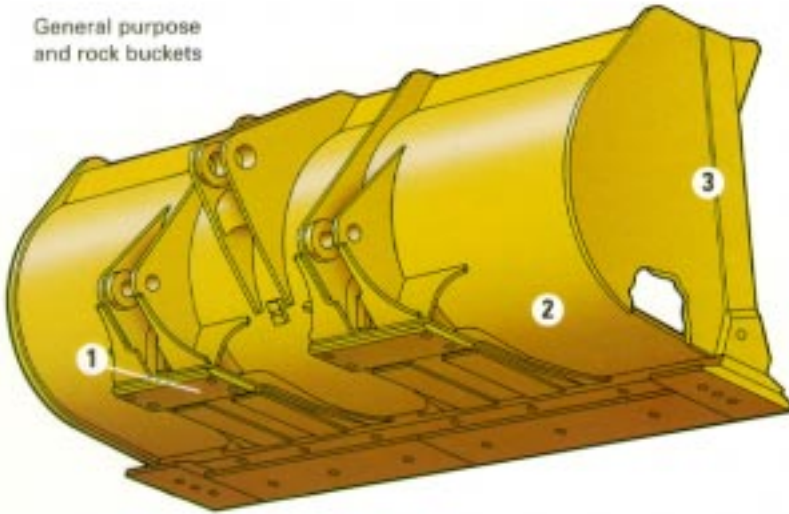
**Optional Payload Measurement**

**System** offers on-the-go weighing to assist operators in loading trucks more accurately.

# Buckets

*A choice of 12 buckets lets you tailor the machine to the job.*

General purpose  
and rock buckets



**Rugged design.** All buckets are built with shell-tine construction that resists twisting and distortion. Replaceable, bolt-on wear plates protect the bucket bottom. Patented Cat Corner Guard Cutting Edge System protects the corners for long-term wear.

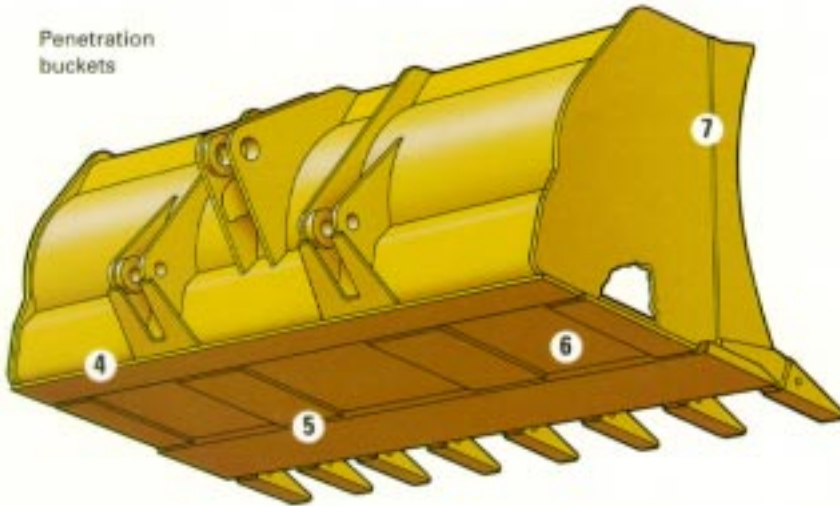
**General purpose and rock buckets**—excellent for excavating, stockpiling and general purpose work

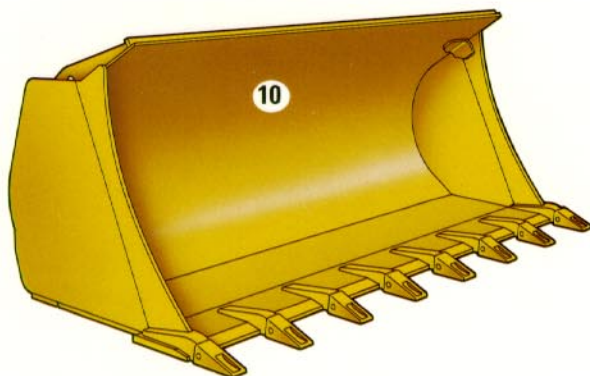
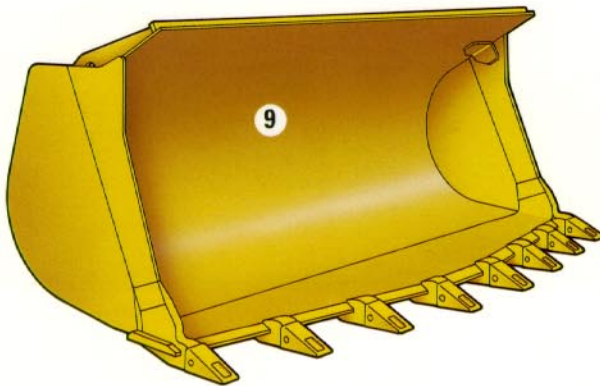
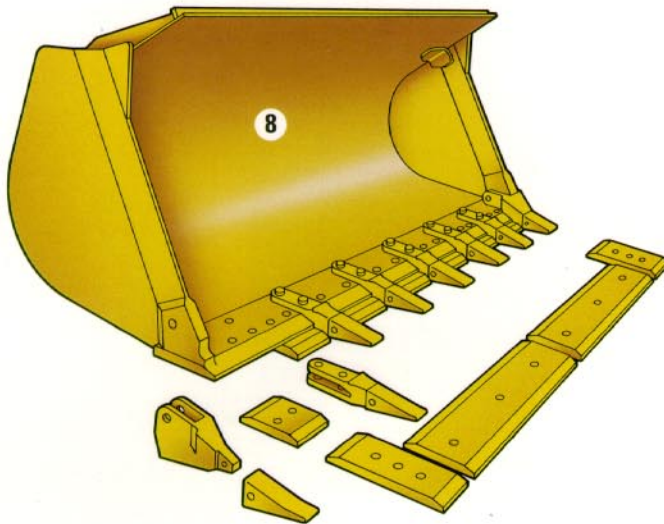
- 1 Bolt-on wear plates
- 2 Sloped floor
- 3 Straight, sharp side bar

**Penetration buckets**—excellent for site preparation work

- 4 Full-width backdrag edge
- 5 Fore/aft wear strips
- 6 Flat floor
- 7 Curved, sharp side bar

Penetration  
buckets





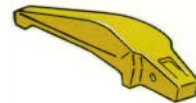
**8 General purpose buckets** are available with teeth, teeth and segments or reversible cutting edges. All options bolt on.

**9 Rock buckets** have a spade-edge design that makes them well suited to high-impact jobs. Rock buckets are available with or without teeth.

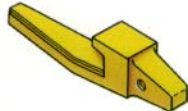
**10 Penetration buckets** are the right choice for moderate breakout force. The flush-mount teeth are welded on.

### Tooth Options

Flush-Mount



Bottom Strap



Two Strap  
Two Bolt



Unitooth



### Tip Options

Short



Long



Abrasion



Penetration



## Complete Customer Support

*When you buy a Cat machine,  
you also get Caterpillar's total commitment to customer support.*



**Easy maintenance.** In addition to the servicing features built into the engine (see page 4), the 966F Series II includes:

- Hinged doors for access to battery boxes.
- Diagnostic connector to analyze electrical functions quickly.
- Ground-level access to lubrication points.
- Hydraulic pressure taps for checking hydraulic pressures.

Cat dealers are also available to help you manage your machine service. Ask about our preventive maintenance programs.

**Parts availability.** Most Cat parts are immediately available from any dealer. Cat dealers rely on our worldwide computer network to find parts instantly and minimize your machine downtime. Many components are economically available as Caterpillar Remanufactured parts.

**Flexible financing.** Your dealer can arrange affordable financing for the entire Caterpillar equipment line. Talk to your dealer to learn how terms can be structured to meet your cash flow requirements.

## Engine

Four-stroke cycle, six cylinder 3306 turbocharged diesel engine.

Ratings at 2200 RPM	kW	HP
Gross power	175	235
Flywheel power	164	220
DIN 70020	170	228
ISO 1585	164	220
ISO 3046-2	164	220
EEC 80/1269	164	220
ISO 9249	164	220

### Dimensions

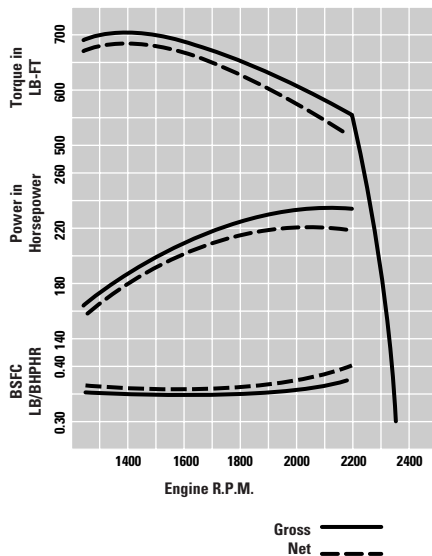
Bore	120.7 mm	4.75 in.
Stroke	152.4 mm	6.0 in.
Displacement	10.5 liters	638 cu in.

### Exhaust emissions

The 3306 DITA meets the following emissions requirements:

- EEC JUL 1997
- US EPA JAN 1996
- Japan MOC APRIL 1997

	g/kWh	g/hp-hr
Hydrocarbons (HC)	0.50	0.37
Carbon monoxide (CO)	1.74	1.30
Nitrogen oxides (NO <sub>x</sub> )	8.35	6.23



### Power rating conditions

- based on SAE J1349 standard conditions of 25°C (77°F) and 100 kPa (29.6")
- used 35° API, 16°C (60°F), gravity fuel
- fuel had LHV of 42 780 kJ/kg (18,390 Btu/lb) when used at 29°C (85°F)
- fuel density of 838.9 g/L (7.001 lb/gal)
- flywheel power ratings are for engine equipped with fan, alternator, air cleaner, water pump, fuel pump, muffler, and lubricating oil pump
- no derating required up to 2286 m (7500 ft) altitude

### Features

- direct-injection fuel system with individual adjustment-free injection pumps and valves
- 3-ring aluminum-alloy pistons, cam-ground, tapered and cooled by oil spray
- spiral ground, stellite faced valves
- tapered connecting rods
- one-piece cylinder head design with integrally cast intake manifold
- deep-skirted cast cylinder block
- induction-hardened, forged crankshaft
- gear driven water pump, air compressor and power steering pump
- direct-electric 24-volt starting and charging system with 12-volt, 100 amp-hour batteries
- standard ether starting aid
- standard oil cooler

## Transmission

Planetary power shift transmission with four speeds forward and reverse.

### Maximum travel speeds (standard 26.5-25 tires)

		km/h	MPH
Forward	1	7.3	4.5
	2	13.0	8.1
	3	22.5	14.0
	4	38.8	24.1
Reverse	1	8.3	5.2
	2	14.8	9.2
	3	25.6	15.9
	4	43.9	27.3

### Features

- automatic shift capability
- Quick Gear Kickdown Switch
- single lever to control both speed and direction
- single-stage, single-speed torque converter
- optional extreme service transmission is available (recommended for millyard/logging applications)

## Axles

Fixed front, oscillating rear ( $\pm 13^\circ$ ).

### Features

- maximum single-wheel rise and fall: 495 mm (19.5")
- differentials, enclosed brakes and final drives included
- threaded nuts to set bearing pre-load
- Duo-Cone Seals between axle and housing
- uses SAE 30W (oil change interval: 2000 hours or 1 year)

## Brakes

Meets the following standards: OSHA, SAE J1473 DEC84, ISO 3450-1985.

### Service brake features

- full-hydraulic wet disc brakes
- completely enclosed and sealed
- adjustment-free
- separate circuits for front and rear axles
- dual pedal braking system with switchable left pedal

### Parking brake features

- mechanical, shoe-type brake
- mounted on transmission output shaft for manual operation

### Secondary brake features

- Computerized Monitoring System alerts operator if pressure drops and automatically applies parking brake

## Final Drives

Planetary final drives consist of ring gears and planetary carrier assemblies.

### Features

- ring gears are pressed in and doweled to axle housings
- carrier assemblies include:
  - planet gears with full-floating bronze sleeve bearings
  - planet shafts
  - retaining pins
  - bearings
  - sun gear shafts
  - planetary carriers

## Loader Hydraulic System

Open-centered, interrupted series system with full-flow filtering. System is completely sealed. Pilot-operated controls.

### Implement system, vane-type pump

Output at 2092 RPM and 6900 kPa (1000 psi) with SAE 10W oil at 66°C (150°F)	302 liters/min	79 gpm
Relief valve setting	20 700 kPa	3000 psi
Cylinders, double acting: lift, bore and stroke	178 x 759 mm	7.00 x 29.8"
Cylinders, double acting: tilt, bore and stroke	210 x 535 mm	8.25 x 21.0"

### Pilot system, vane-type pump

Output at 2092 RPM and 6900 kPa (1000 psi) with SAE 10W oil at 66°C (150°F)	21.0 liters/min	5.5 gpm
Relief valve setting	2525 kPa	366 psi

### Hydraulic cycle time

Raise	7.1
Dump	2.0
Lower, empty, float down	2.4
Total	11.5 seconds

### Features

- completely enclosed system
- low effort, pilot-operated controls
- full-flow filtering
- reusable couplings with O-Ring Face Seals

## Cab

Caterpillar cab and Rollover Protective Structure (ROPS) are standard in North America, Europe and Japan.

### Features

- meets OSHA and MSHA limits for operator sound exposure with doors and windows closed (according to ANSI/SAE J1166 JUL87)
- ROPS meets the following criteria:
  - SAE J394
  - SAE 1040 APR88
  - ISO 3471-1986
- also meets the following criteria for Falling Objects Protective Structure:
  - SAE J231 JAN81
  - ISO 3449-1984

### Note

When properly installed and maintained, the cab offered by Caterpillar when tested with doors and windows closed according to ANSI/SAE J1166 MAY90, meets OSHA and MSHA requirements for operator sound exposure limits in effect at time of manufacture. The operator sound pressure level is 75 dB(A) when measured per ISO 6394 or 86/662/EEC.

## Tires

Tubeless, nylon, loader design tires.

### Choice of

- 26.5-25, 14 PR (L-2) standard
- 26.5-25, 20 PR (L-3)
- 26.5-R25 GP-2B(L-2/3) radial
- 26.5-R25 XHA (L-3) radial
- 23.5-25, 16 PR (L-2)
- 23.5-25, 16 PR (L-3)
- 23.5-25, 24 PR (L-3)
- 23.5-R25 GP-2B (L-2/3) radial
- 23.5-R25 XHA (L-3) radial

### Note

In certain applications (such as load-and-carry work) the loader's productive capabilities might exceed the tires' tonnes-km/h (ton-MPH) capabilities. Caterpillar recommends that you consult a tire supplier to evaluate all conditions before selecting a tire model. Other special tires are available on request.

## Steering

Full hydraulic power steering.

### Ratings

Minimum turning radius (over tire)	6779 mm (22'3")
Steering angle, each direction	35°
Hydraulic output at 2092 RPM and 6900 kPa (1000 psi)	189 liters/min (50 gpm)
Relief valve setting	20 700 kPa (3000 psi)

### Features

- center-point frame articulation
- hydraulic neutralizer steering stops
- dedicated hydraulic steering pump
- front and rear wheels track
- flow-amplified, open-center, pressure-compensated system
- steering-wheel operated metering pump controls flow to steering cylinders
- full-flow filtering
- adjustable steering column

## Bucket Controls

Pilot-operated lift and tilt circuits.

### Lift circuit features

- four positions: raise, hold, lower and float
- can adjust automatic kickout from horizontal to full lift

### Tilt circuit features

- three positions: tilt back, hold, and dump
- can adjust automatic bucket positioner to desired loading angle
- does not require visual spotting

### Controls

- two-lever control standard
- optional single-lever control available
- both types of controls available with three-valve hydraulic system

## Service Refill Capacities

	L	Gallons
Fuel tank	377	99.6
Cooling system	41	11.0
Crankcase	28	7.3
Transmission	59	15.0
Differentials and final drives		
front	47	12.4
rear	47	12.4
Hydraulic system (including tank)	205	54.2
Hydraulic tank	140	37.0

# Operation Specifications

		General purpose bucket								
Rated bucket capacity	m <sup>3</sup>	3.8			3.6			3.5		
	yd <sup>3</sup>	5.0			4.75			4.5		
		Bolt-on edges	Teeth & segments	Teeth	Bolt-on edges	Teeth & segments	Teeth	Bolt-on edges	Teeth & segments	
Struck capacity	m <sup>3</sup>	3.25	3.25	3.04	3.18	3.18	2.76	2.91	2.91	
	yd <sup>3</sup>	4.26	4.26	3.95	4.17	4.17	3.59	3.81	3.81	
Width	mm	3059	3107	3107	3059	3107	3107	3059	3107	
	in	120	122	122	120	122	122	120	122	
Dump clearance at full lift and 45° discharge	mm	2981	2845	2845	2981	2845	2845	3055	2921	
	ft/in	9'9"	9'4"	9'4"	9'9"	9'4"	9'4"	10'0"	9'7"	
Reach at full lift and 45° discharge	mm	1275	1398	1398	1275	1398	1398	1227	1352	
	ft/in	4'2"	4'7"	4'7"	4'2"	4'7"	4'7"	4'0"	4'5"	
Reach at 45° discharge and 2130 mm (7 ft 0 in) clearance	mm	1832	1892	1892	1832	1892	1892	1814	1883	
	ft/in	6'0"	6'2"	6'2"	6'0"	6'2"	6'2"	5'11"	6'2"	
Reach with lift arms horizontal and bucket level	mm	2583	2764	2764	2583	2764	2764	2493	2674	
	ft/in	8'6"	9'1"	9'1"	8'6"	9'1"	9'1"	8'2"	8'9"	
Digging depth	mm	82	82	52	82	82	52	82	82	
	in	3.2	3.2	2.0	3.2	3.2	2.0	3.2	3.2	
Overall length	mm	8303	8506	8506	8213	8506	8506	8213	8416	
	ft/in	27'3"	27'11"	27'11"	26'11"	27'11"	27'11"	26'11"	27'7"	
Overall height with bucket at full raise	mm	5589	5589	5589	5589	5589	5589	5515	5515	
	ft/in	18'4"	18'4"	18'4"	18'4"	18'4"	18'4"	18'1"	18'1"	
Loader clearance circle with bucket in carry position	mm	14 722	14 876	14 876	14 722	14 876	14 876	14 674	14 828	
	ft/in	48'4"	48'10"	48'10"	48'4"	48'10"	48'10"	48'2"	48'8"	
Static tipping load straight**	kg	14 130	14 372	14 275	14 094	13 960	14 293	14 249	14 056	
	lb	31,157	31,690	31,476	31,077	30,782	31,516	31,419	30,993	
Static tipping load full 35° turn**	kg	12 854	13 057	12 987	12 818	12 684	13 005	12 966	12 772	
	lb	28,343	28,791	28,636	28,264	27,968	28,676	28,590	28,162	
Breakout force***	kN	201.0	200.2	215.5	201.1	201.0	215.9	216.6	214.9	
	lb	45,187	45,007	48,446	45,209	45,187	48,536	48,693	48,311	
Operating weight**	kg	20 732	20 905	20 751	20 725	20 898	20 744	20 672	20 845	
	lb	45,714	46,096	45,756	45,699	46,080	45,741	45,582	45,963	

\* All buckets shown can be used on high lift arrangement. High lift column shows changes in specifications from standard lift to high lift. Add or subtract as indicated to or from specifications given for appropriate bucket to calculate high lift specifications.

\*\* Static tipping load and operating weight shown include sound-suppression cab and ROPS, 26.5-25 tires, full fuel tank, coolant, lubricants and operator.

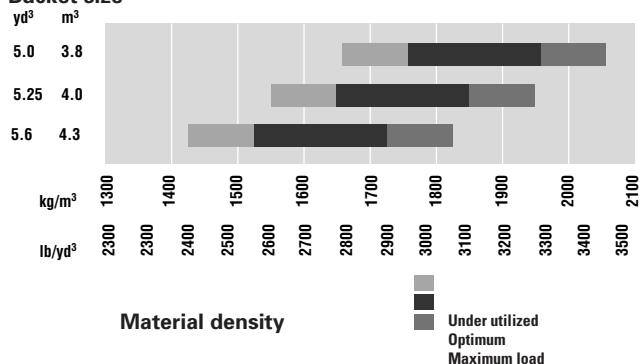
\*\*\* Measured 102 mm (4.0"): behind tip of cutting edge with bucket hinge pin as pivot point in accordance with SAE J732c.



		Penetration bucket	Rock bucket		High Lift Arrangement*
	3.3 4.25	3.6 4.75	3.5 4.5		same same
	<b>Teeth</b>	<b>Teeth</b>	<b>No teeth</b>	<b>Bottom strap teeth</b>	
	2.76 3.62	3.12 4.09	2.94 4.51	2.94 4.51	same same
	3107 122	3128 123	3085 121	3085 121	same same
	2921 9'7"	2769 9'1"	3016 9'11"	2801 9'2"	+600 +23.6"
	1352 4'5"	1318 4'4"	1358 4'5"	1523 5'0"	+37 +1.5"
	1883 6'2"	1774 5'10"	1930 6'4"	1995 6'6"	+497 +19.6"
	2674 8'9"	2786 9'2"	2616 8'7"	2877 9'5"	+465 +18.3"
	52 2.0	52 2.0	52 2.0	52 2.0	same same
	8416 27'7"	8491 22'10"	8311 27'3"	8630 28'4"	+576 +22.7"
	5515 18'1"	5589 18'4"	5610 18'5"	5610 18'5"	+600 +23.6"
	14 828 48'8"	14 880 48'10"	14 748 48'5"	14 926 49'0"	+251 +9.9"
	14 433 31,825	14 184 31,276	14 377 31,701	14 303 31,538	-468 -1030
	13 137 28,967	12 898 28,440	13 080 28,841	13 005 28,676	-554 -1220
	233.6 52,515	215.1 48,356	196.1 44,123	197.0 44,325	-24.5 -5,511
	20 691 45,624	20 810 45,886	20 768 45,793	20 834 45,939	+1202 +2645

## Bucket Size Selector

### Bucket size

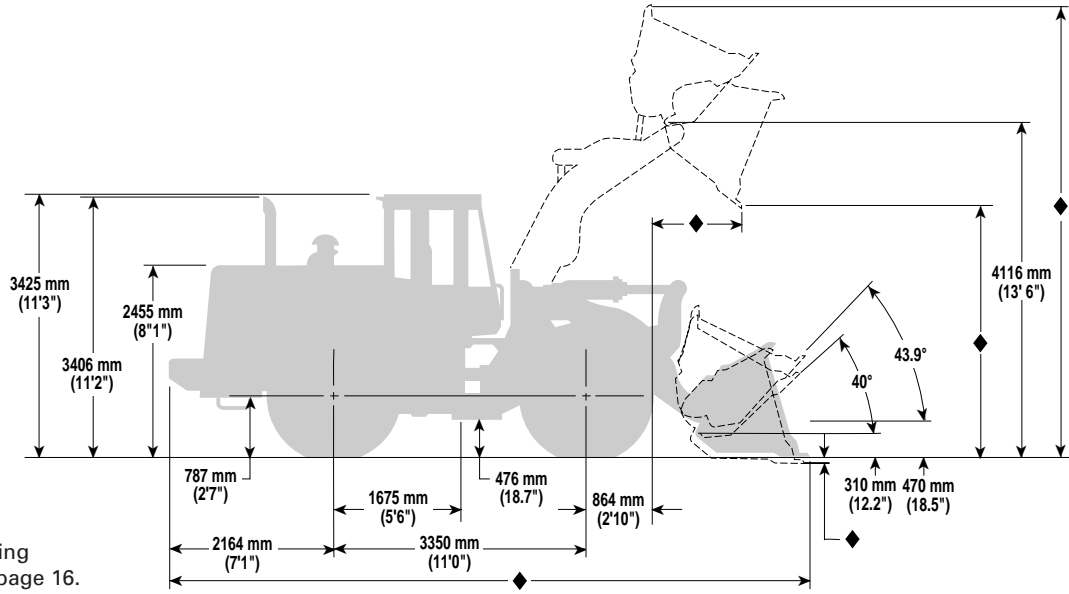


## Typical material densities-loose

	kg/m <sup>3</sup>	lb/yd <sup>3</sup>
Basalt	1960	3305
Bauxite, Kaolin	1420	2394
Clay		
natural bed	1660	2799
dry	1480	2495
wet	1660	2799
Clay and gravel		
dry	1420	2394
wet	1540	2596
Decomposed rock		
75% rock, 25% earth	1960	3305
50% rock, 50% earth	1720	2900
25% rock, 75% earth	1570	2647
Earth		
dry, packed	1510	2546
wet, excavated	1600	2698
Granite		
broken	1660	2799
Gravel		
pitrun	1930	3254
dry	1510	2546
dry, 6-50 mm (.2-2")	2690	2849
wet, 6-50 mm (.2-2")	2020	3406
Gypsum		
broken	1810	3052
crushed	1600	2698
Limestone		
broken	1540	2596
crushed	1540	2596
Sand		
dry, loose	1420	2394
damp	1690	2849
wet	1840	3102
Sand and clay		
loose	1600	2698
Sand and gravel		
dry	1720	2900
wet	1840	3102
Sandstone	1510	2546
Shale	1250	2107
Slag		
broken	1750	2950
Stone		
crushed	1600	2698

# Dimensions

All dimensions are approximate.



◆ Dimensions vary with bucket. Refer to operating specifications chart on page 16.

Tread width for all tires 2200 mm (86.6")

	Width over tires		Ground clearance		Change in vertical dimensions	
	mm	inches	mm	inches	mm	inches
26.5-25, 14 PR (L-2) standard	2942	115.9	476	18.7	—	—
26.5-25, 20 PR (L-3)	2949	116.1	497	19.6	+21	+0.8
26.5-R25 GP-2B (L-2/3) radial	2938	115.6	497	19.6	+21	+0.8
26.5-R25 XHA (L-3) radial	2940	115.7	482	19.0	+6	+0.2
23.5-25, 16 PR (L-2)	2865	112.8	437	17.2	-39	-1.5
23.5-25, 16 PR (L-3)	2862	112.7	434	17.1	-42	-1.7
23.5-25, 24 PR (L-3)	2862	112.7	434	17.1	-42	-1.7
23.5-R25 GP-2B (L-2/3) radial	2875	113.2	438	17.2	-38	-1.5
23.5-R25 XHA (L-3) radial	2877	113.3	419	16.5	-57	-2.2

# Supplemental Specifications

	Change in Operating Weight		Change in Articulated Static Tipping Load	
	kg	lb	kg	lb
Remove cab only, ROPS remains	-177	-390	-150	-331
26.5-25, 20 PR (L-3)	+350	+772	+234	+516
26.5-R25, GP-2B, (L-2/3) radial	+526	+1160	+352	+776
26.5-R25, XHA (L-3) radial	+561	+1237	+376	+829
23.5-25, 16 PR (L-2)	-419	-924	-281	-620
23.5-25, 16 PR (L-3)	-257	-567	-172	-379
23.5-25, 24 PR (L-3)	-130	-287	-88	-194
23.5-R25, GP-2B (L2/3) radial	-103	-227	-69	-152
23.5 R25, XHA (L-3) radial	-19	-42	-13	-29
Tire ballast 23.5-25 bias ply tires	+752	+1658	+1007	+2220
Tire ballast 26.5-25 bias ply tires	+1516	+3342	+2032	+4481

Note: Tire options include tires and rims.

## Standard Equipment

Standard and optional equipment may vary. Consult your Caterpillar dealer for specifics.

Alternator (50-amp)	Fenders	Seat, suspension (fully adjustable)
Automatic bucket positioner	Gauges (coolant temperature, fuel level, tachometer, speedometer)	Seat belt, retractable
Automatic lift kickout	Heater/defroster/pressurizer	Sight gauge (for engine coolant and hydraulic tank)
Back up alarm	Horn, electric	Starting and charging system (24-volt)
Batteries (two 12-volt, 100 amp-hour)	Indicators (engine air filter and service hour meter)	Tires (26.5-25) 14 PR (L-2)
Brake system (service, parking, secondary)	Key (single key for cab and access doors)	Windshield washers/wipers (front and rear), front intermittent
Cab with sound suppression, canopy and rollover protective structure (ROPS)	Lights (front and rear), Halogen	
Computerized Monitoring System *	Lock (hydraulic implement control levers)	<b>*Functions analyzed by Computerized Monitoring System</b>
Coolers (engine oil, hydraulic oil and transmission oil)	Muffler	<b>Category I:</b> Fuel level
Diagnostic connector	Radiator, multi-row modular	<b>Category II:</b> Coolant, hydraulic oil and transmission oil temperatures
Drawbar hitch pin	Rearview mirrors, interior	<b>Category III:</b> Engine oil and brake air pressures, parking brake engaged, supplemental steering if so equipped, low hydraulic oil level indicator.

## Optional Equipment

With approximate changes in operating weights.

	kg	lb		kg	lb
Air conditioning (R134a Refrigerant)	73	161	Seat, air suspension	32	71
Alternator (75 amp)	0	0	Signal lights, directional	10	22
Axle seal guard	10	21	Single lever bucket controls, lift and tilt	0	0
Brake Oil Cooler			Starting aids		
Buckets		see page 16	Engine coolant heater, 120-volt	1.4	3
Cab removed, ROPS remains	-177	-390	Receptacle, 120-volt	1.4	3
Differentials:			Steering, supplemental	122	269
NoSpin	-2	-4	Tires		see pages 15 & 18
Limited slip	16.8	37	Waste handling arrangement	—	—
Ether starting aid, canister not included			Field installed attachments and kits:		
Extreme service transmission	18	40	Guard, crankcase		
Fender Extension Package			Guard, power train		
Flexxaire fan	23	50	Engine coolant heater, 120-volt		
Guards:			Lighting system, warning (rotating beacon)		
Crankcase	45	99	Mirrors rearview		
Power train	102	224	Emergency starting receptacle		
Hydraulic arrangement, three valve	91	200	Radio, AM/FM cassette		
Logging arrangement	130	287	(fixed mounting and quick release versions)		
Mirrors, outside mounted	28	62	Payload Measurement System kit		
Millyard and woodchip arrangement	—	—	Ride Control kit		
Payload Measurement System	26	57	Pre-lube 42 mt kit		
Ride Control System	91	200	Flexxaire fan kit		

# 966F Series II Wheel Loader

AEHQ3801-04 (12-96)  
(Replaces AEHQ3801-03)

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Materials and specifications are subject to change without notice.

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