



950F
Series II
Wheel Loader



Cat 3116 Engine

Gross power	134 kW	180 HP
Flywheel power	127 kW	170 HP
Bucket capacities	2.5 to 3.1 m ³	3.25 to 4.0 yd ³
Operating weight	16 563 kg	36,521 lb

950F Series II Wheel Loader

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

Engine

Cat 3116 engine is built for performance, durability, serviceability, excellent fuel economy, and low emissions. **pg. 4**

Power Train

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

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 excellent 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.



Hydraulics

Powerful Caterpillar hydraulics provide strength and versatility for various applications, giving the 950F Series II exceptional lift capacity and load handling. Hydraulics are also the key to automotive-like steering and ride control. **pg. 7**

Operator's Station

Ergonomically designed for total machine control in a comfortable, roomy environment. All control levers, switches and gauges are positioned to maximize productivity. *Easy to see and read Caterpillar Monitoring System features electronic analog gauges. Automatic transmission with quick gear kickdown capability optimizes production.* **pg. 8-9**

Buckets

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



3116 Engine

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



Powerful performance. The 950F Series II performs at full-rated gross power of 134 kW (180 hp). The four-stroke cycle design delivers long power strokes and efficient fuel combustion. The turbocharged and aftercooled Caterpillar 3116 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 forged and induction hardened for long-term durability.

3 Individual, high-pressure unit injectors atomize fuel efficiently for economy and low emissions.

4 Deep skirt designed block

5 Low mounted oil pump

6 Ferrous aluminum — 2 piece articulated pistons

7 Camshaft roller followers

8 Jacket water aftercooled

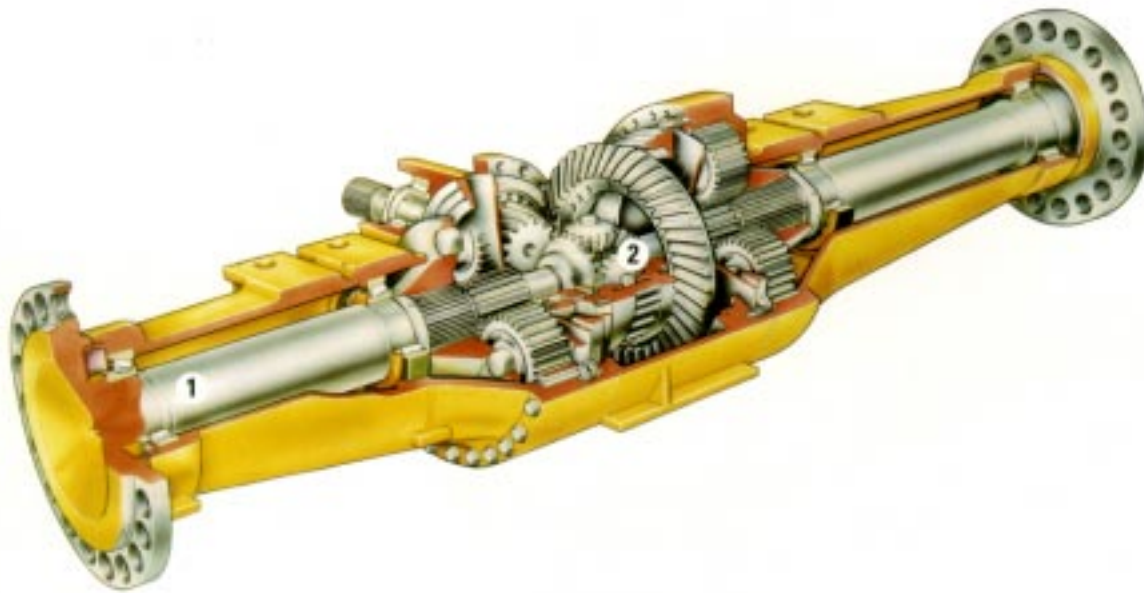
Modular radiator cools efficiently. Grill swings out for easy repair or installation of individual modules, and sight gauge allows for quick check of coolant level.

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 3116 engine:

- Parent-metal cylinder block can be rebored twice and dry-sleeved.
- 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

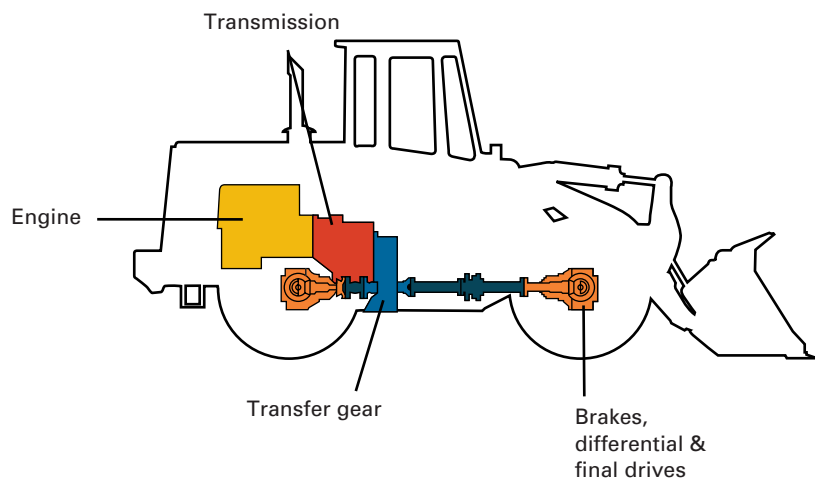
The Cat power train makes dependable performance a standard feature.



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. Oil-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.

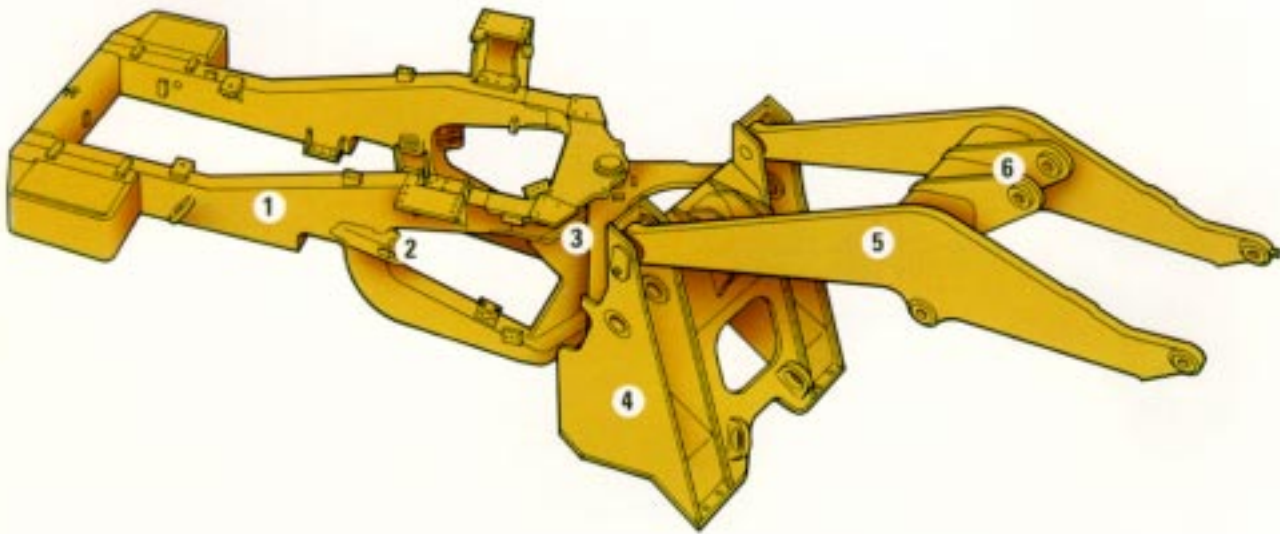
2 Optional limited-slip differentials and NoSPIN rear differential are available to deliver maximum traction in severe ground conditions.

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 load better.

3 35° center-point articulation allows cycling in tight quarters.

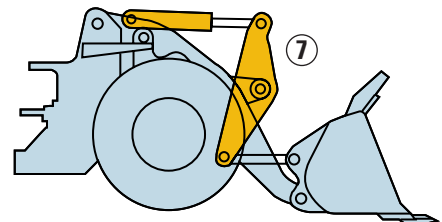
4 Full four-plate loader tower provides rigid mounting for lift arms, resists stress and protects hydraulic cylinders and lines from damage by debris.

5 Lift arms are made of solid steel to stand up to any stress load.

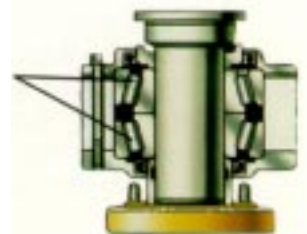
6 Cast cross tube provides extra rigidity and maintains pin bore alignment.

7 Z-bar loader linkage gives the 950F 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.

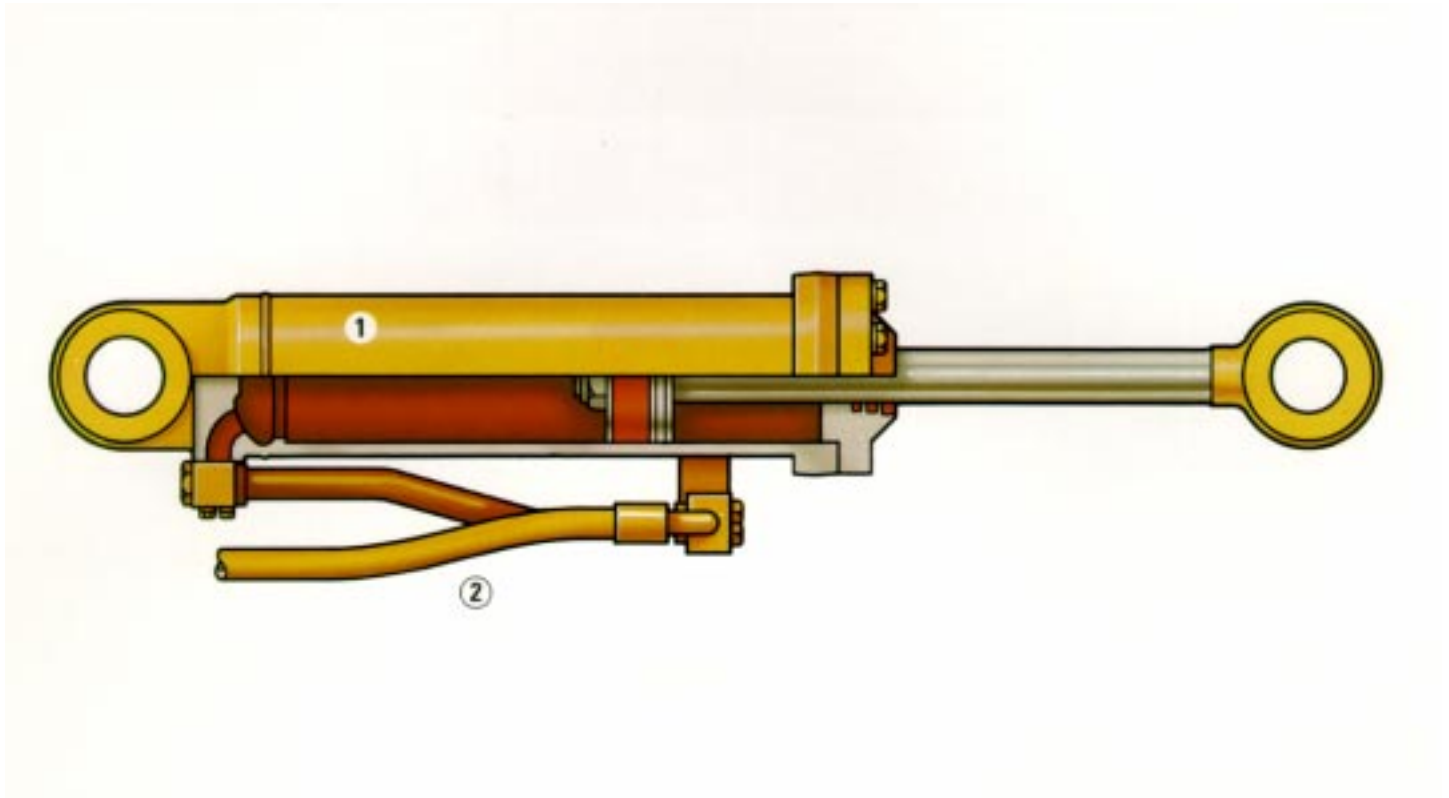


Double tapered roller bearings on both upper and lower hitch



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. This Caterpillar system uses a nitrogen/oil accumulator in the hydraulic lift circuit that acts as a shock absorber. Automatic Ride Control System benefits include a more controlled ride, less dynamic stress on structures and components, reduced tire flexing and greater payload retention. Collectively these benefits contribute to improved operator efficiencies, lower operating costs 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 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.

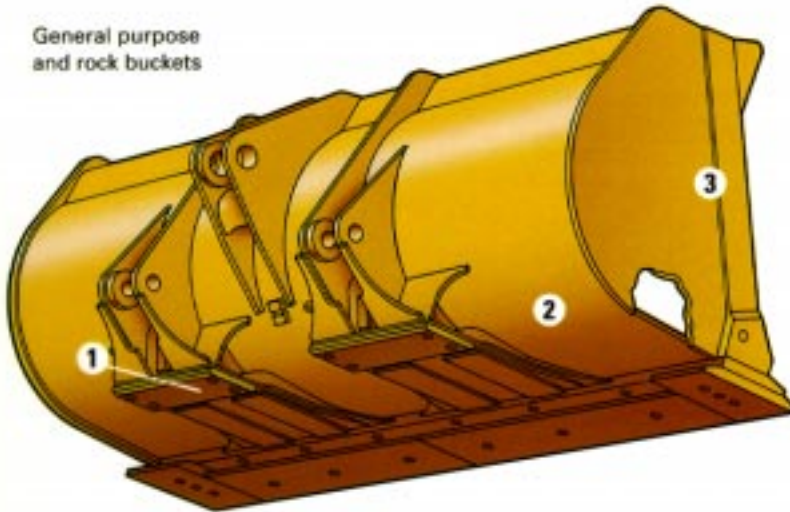
Windshield washers/wipers are standard features on front and rear windows. Front wiper has intermittent speed capability and in-the-blade washer delivery system.

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.

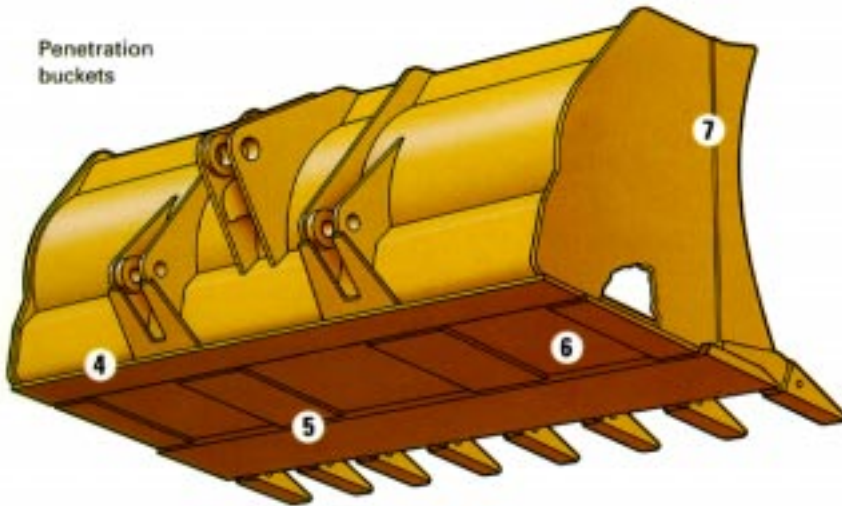
General purpose and rock buckets—excellent for excavating, stockpiling and general purpose work - feature:

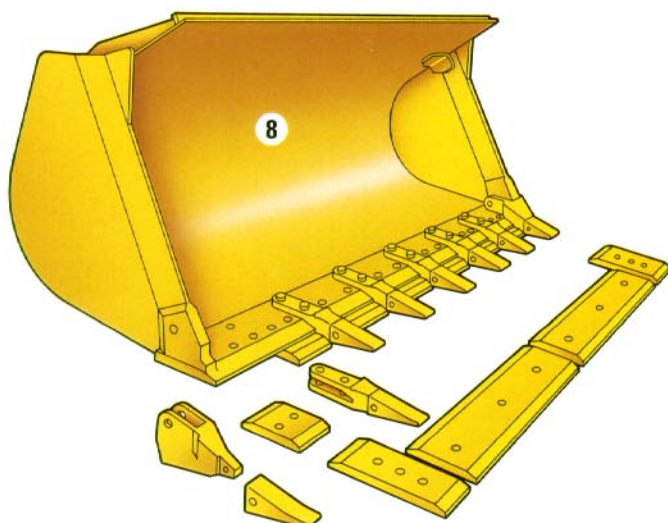
- 1 Bolt-on wear plates
- 2 Sloped floor
- 3 Straight, sharp side bar

Penetration buckets—excellent for site preparation work - feature:

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

Penetration
buckets

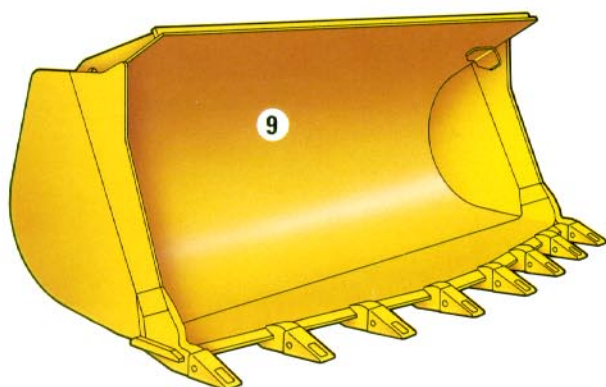




8 General purpose buckets are available with teeth, teeth and segments or reversible cutting edges. All options bolt on.

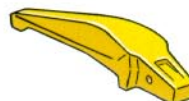
9 Rock buckets have a spade-edge design that makes them well suited to high-impact jobs. Rock buckets are available with or without teeth.

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



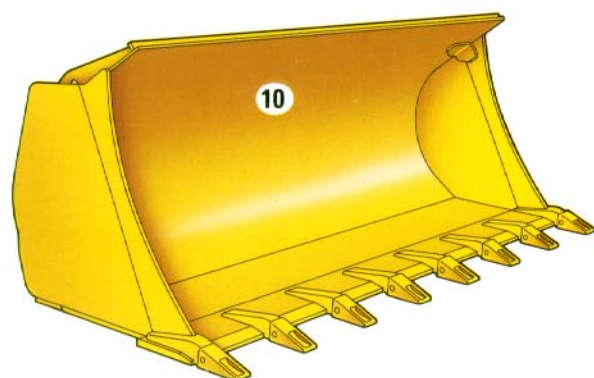
Long



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 950F 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 line. Talk to your dealer to learn how terms can be structured to meet your cash flow requirements.

Engine

Four-stroke cycle, six cylinder 3116 turbocharged diesel engine.

Ratings at 2200 RPM

	kW	HP	PS
Gross power	134	180	—
Flywheel power	127	170	—
DIN 70020	—	—	176
ISO 1585	127	170	—
ISO 3046-1	127	170	—
EEC 80/1269	127	170	—
ISO 9249	127	170	—

Dimensions

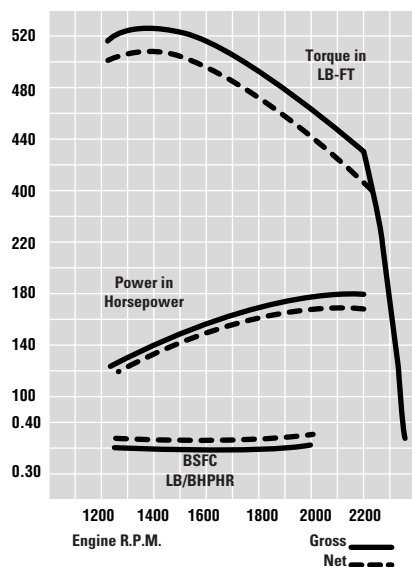
Bore	105 mm	4.13 in.
Stroke	127 mm	5.0 in.
Displacement	6.6 liters	403 cu in.

Exhaust emissions

The 3116 meets the following emissions requirements:

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

	g/kWh	g/hp-hr
Hydrocarbons (HC)	0.43	0.32
Carbon monoxide (CO)	1.81	1.35
Nitrogen oxides (NO _x)	8.16	6.09



Power rating conditions

- based on standard air conditions of 25° C (77° F) and 100 kPa (29.6" Hg) total barometer
- used 35° API, 16° C (60° F), gravity fuel
- fuel had LHV of 42780 kJ/kg (18,390 Btu/lb) when used at 30° C (86° 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 2300 m (7550 ft) altitude

Features

- direct-injection fuel system with individual adjustment-free unit injectors for cylinders
- 3-ring aluminum-alloy/forged steel 2 piece articulated pistons, cam-ground, tapered and cooled by oil spray
- standard oil cooler
- tapered connecting rods
- uniflow cylinder head design with two alloy-steel valves per cylinder
- deep-skirted cast cylinder block
- induction-hardened, forged crankshaft
- oscillating roller-followers and short pushrods
- direct-electric 24-volt starting and charging system with 12-volt, 100 amp-hour batteries

Transmission

Planetary power shift transmission with four speeds forward and reverse.

Maximum travel speeds (standard 23.5-25 tires)

		km/h	MPH
Forward	1	7.4	4.6
	2	13.3	8.3
	3	23.1	14.4
	4	38.7	24.0
Reverse	1	8.2	5.1
	2	14.7	9.1
	3	25.5	15.8
	4	42.7	26.5

Features

- single lever to control both speed and direction
- separate control to lock in neutral
- single-stage, single-phase torque converter
- automatic shift capability
- Quick Gear Kickdown Switch

Axles

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

Features

- maximum single-wheel rise and fall: 470 mm (18.5")
- 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 actuated, oil-disc brakes
- completely enclosed and sealed
- adjustment-free
- separate circuits for front and rear axles
- dual pedal braking system with left and right pedals that can be switched between brake/neutralizer and brake only

Parking brake features

- mechanical, shoe-type brake
- mounted on drive shaft

Secondary brake features

- Caterpillar Monitoring System alerts operator if brake oil 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 2280 RPM and 6890 kPa (1000 psi)		
with SAE 10W oil at 66° C (150° F)	237 liters/min	63 gpm
Relief valve setting	20 700 kPa	3000 psi
Cylinders, double acting: lift, bore and stroke	152.4 x 751 mm	6.00 x 29.7"
Cylinder, double acting: tilt, bore and stroke	177.8 x 536 mm	7.00 x 21.1"

Pilot system, vane-type pump

Output at 2280 RPM and 6890 kPa (1000 psi)		
with SAE 10W oil at 66° C (150 F°)	19.0 liters/min	5 gpm
Relief valve setting	2410 kPa	350 psi

Hydraulic cycle time

Raise	6.6
Dump	2.2
Lower, empty, float down	3.0
Total	11.8 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 May90)
- 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

- 23.5-25, 12 PR (L-2) standard
- 23.5-25, 16 PR (L-3)
- 23.5-R25 GP-2B(L-2/3) steel radial
- 23.5-R25 XHA (L-3) steel radial
- 20.5-25, 12 PR (L-2)
- 20.5-25, 16 PR (L-2)
- 20.5-25, 16 PR (L-3)
- 20.5-25, 20 PR (L-3)
- 20.5-R25 GP-2B (L-2/3) steel radial
- 20.5-R25 XGLA (L-2) steel radial
- 20.5-R25 XHA (L-3) steel 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.

Steering

Full hydraulic power steering.

Ratings

Minimum turning radius (over tire)	6419 mm (21'1")
Steering angle, each direction	35°
Hydraulic output at 2280 RPM and 6890 kPa (1000 psi)	146 liters/min (38 gpm)
Relief valve setting	17 200 kPa (2495 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, adjustment-free
- full-flow filtering
- tilt-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
- doesn't require visual spotting

Controls

- two lever control standard
- three lever control optional

Service Refill Capacities

	Liters	Gallons
Fuel tank	259	67
Cooling system	49	12.9
Crankcase	31	8.1
Transmission	34	9.0
Differentials and final drives		
front	36	9.5
rear	36	9.5
Hydraulic system (including tank)	153	40.4
Hydraulic tank	88	23.3

Operation Specifications

		General purpose bucket								
Rated bucket capacity	m ³	3.1	2.9			2.7				
	yd ³	4.0	3.75			3.5				
		Bolt-on edges	Teeth & segments	Teeth	Bolt-on edges	Teeth & segments	Teeth	Bolt-on edges	Teeth & segments	
Struck capacity	m ³	2.70	2.63	2.53	2.55	2.49	2.19	2.34	2.28	
	yd ³	3.53	3.44	3.31	3.34	3.26	2.86	3.06	2.98	
Width	mm	2777	2811	2811	2777	2811	2811	2777	2811	
	in	109"	111"	111"	109"	111"	111"	109"	111"	
Dump clearance at full lift and 45° discharge****	mm	2842	2765	2765	2842	2765	2830	2906	2830	
	ft/in	9'4"	9'1"	9'1"	9'4"	9'1"	9'3"	9'6"	9'3"	
Reach at full lift and 45° discharge****	mm	1165	1244	1244	1165	1244	1198	1118	1198	
	ft/in	3'10"	4'1"	4'1"	3'10"	4'1"	3'11"	3'8"	3'11"	
Reach at 45° discharge and 2130 mm (7 ft 0 in) clearance	mm	1652	1693	1693	1652	1693	1680	1635	1680	
	ft/in	5'5"	5'7"	5'7"	5'5"	5'7"	5'6"	5'4"	5'6"	
Reach with lift arms horizontal and bucket level	mm	2440	2582	2582	2440	2582	2500	2358	2500	
	ft/in	8'0"	8'6"	8'6"	8'0"	8'6"	8'3"	7'9"	8'3"	
Digging depth	mm	66	61	36	66	61	36	66	61	
	in	2.6"	2.4"	1.4"	2.6"	2.4"	1.4"	2.6"	2.4"	
Overall length****	mm	7649	7765	7765	7649	7765	7683	7567	7683	
	ft/in	25'2"	25'6"	25'6"	25'2"	25'6"	25'2"	24'10"	25'2"	
Overall height with bucket at full raise	mm	5372	5372	5314	5314	5314	5247	5247	5247	
	ft/in	17'8"	17'8"	17'5"	17'5"	17'5"	17'3"	17'3"	17'3"	
Loader clearance circle with bucket in carry position	mm	13 836	13 889	13 889	13 836	13 889	13 847	13 794	13 847	
	ft/in	45'5"	45'7"	45'7"	45'5"	45'7"	45'5"	45'3"	45'5"	
Static tipping load straight**	kg	11 492	11 442	11 656	11 509	11 461	11 880	11 647	11 613	
	lb	25,340	25,230	25,701	25,377	25,272	26,195	25,682	25,607	
Static tipping load full 35° turn**	kg	10 443	10 388	10 669	10 460	10 408	10 813	10 592	10 553	
	lb	23,027	22,906	23,525	23,064	22,950	23,843	23,355	23,269	
Breakout force***	kg	14 960	17 715	16 242	14 960	17 715	17 315	16 052	16 636	
	lb	32,980	34,054	35,807	32,980	34,054	38,173	35,388	36,675	
Operating weight**	kg	16 470	16 563	16 408	16 451	16 543	16 340	16 402	16 494	
	lb	36,316	36,521	36,180	36,274	36,477	36,030	36,166	36,369	

* 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, 23.5-25 tires, full fuel tank, coolant, lubricants and operator.

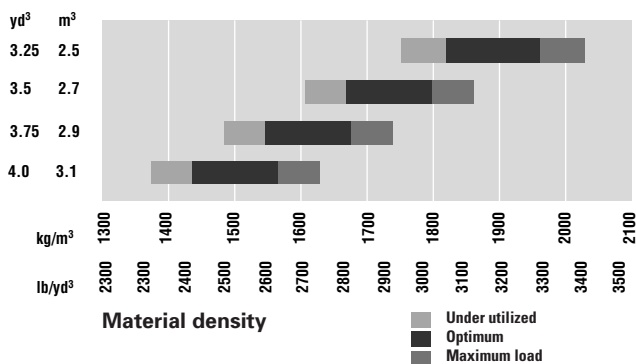
*** Measured 102 mm (4.0"): behind tip of cutting edge with bucket hinge pin as pivot point in accordance with SAE J732c.

**** Dump clearance, reach and overall length dimensions for bucket equipped with teeth reflect actual dimensions. SAE J732C allows dimensions for bucket with teeth to reflect the dimensions using the cutting edge. Caterpillar Inc. uses actual equipped bucket dimensions.

	Penetration bucket	Rock bucket		High Lift Arrangement*
	2.9 3.75	2.7 3.5		same same
	Teeth	Bolt-on edges	Teeth & segments	
	2.53 3.31	2.32 3.03	2.31 3.02	same same
	2825 111	2815 111	2815 111	same same
	2709 8'11"	2820 9'3"	2661 8'9"	+558 +22.0"
	1189 3'11"	1222 4'0"	1351 4'5"	+25 +1.0"
	1610 5'3"	1699 5'7"	1743 5'9"	+462 +18.2"
	2488 8'2"	2493 8'2"	2694 8'10"	+425 +16.7"
	36 1.4	66 2.6	36 1.4	+25 +1.0
	7661 25'2"	7702 25'3"	7936 26'0"	+525 +20.7"
	5363 17'7"	5338 17'6"	5338 17'6"	+558 +22.0"
	13 822 45'9"	13 894 45'7"	13 905 45'7"	+237 +9.3"
	11 568 25,507	11 630 25,644	11 741 25,889	-850 -1874
	10 509 23,172	10 563 23,291	10 672 23,532	-935 -2062
	16 271 35,870	14 610 32,208	14 610 32,208	-878 -1935
	16 514 36,413	16 514 36,413	16 445 36,261	+210 +463

Bucket Size Selector

Bucket size

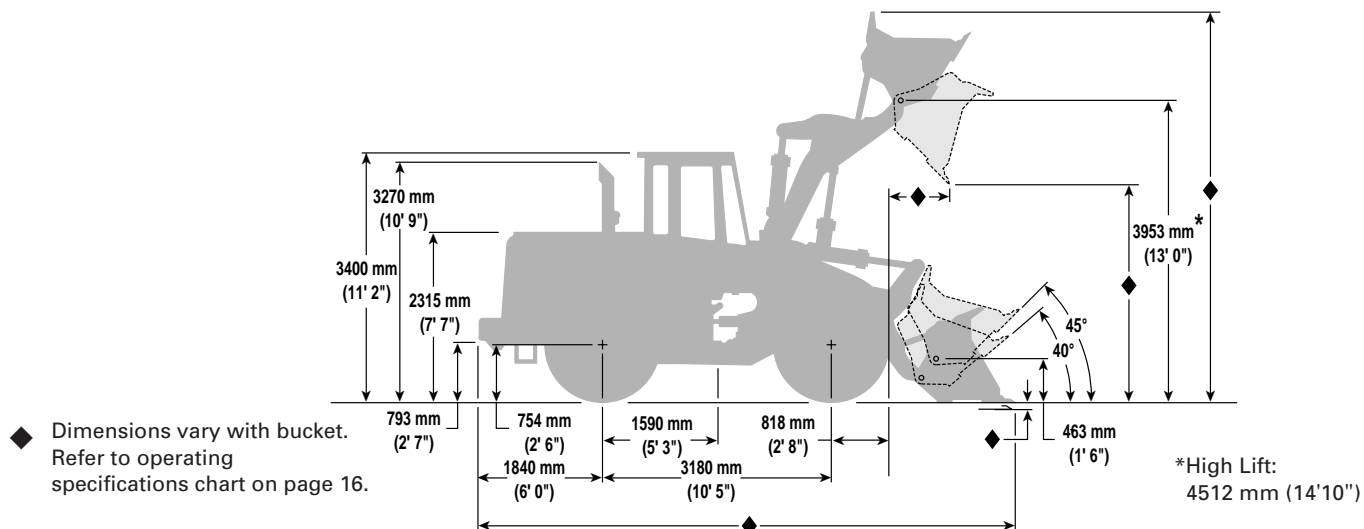


Typical material densities-loose

	kg/m³	lb/yd³
Basalt	1960	3300
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")	1690	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	2020	3406
Sandstone	1510	2546
Shale	1250	2107
Slag		
broken	1750	2950
Stone		
crushed	1600	2698

Dimensions

All dimensions are approximate



Tread width for all tires 2090 mm (82")

	Width over tires		Ground clearance		Change in vertical dimensions	
	mm	inches	mm	inches	mm	inches
23.5-25, 12 PR (L-2) standard	2753	108.4	474	18.7	—	—
23.5-25, 16 PR (L-3)	2749	108.2	474	18.7	—	—
23.5-R25 GP-2B (L-2/3) steel radial	2756	108.5	474	18.7	—	—
23.5-R25 XHA (L-3) steel radial	2761	108.7	460	18.1	-16	-0.62
20.5-25, 12 PR (L-2)	2684	105.6	394	15.5	-80	-3.1
20.5-25, 16 PR (L-2)	2684	105.6	394	15.5	-80	-3.1
20.5-25, 16 PR (L-3)	2675	105.3	423	16.7	-51	-2.0
20.5-25, 20 PR (L-3)	2675	105.3	423	16.7	-51	-2.0
20.5-R25 GP-2B (L-2/3) steel radial	2672	105.2	406	16.0	-68	-2.7
20.5-R25 XHA (L-3) steel radial	2676	105.4	402	15.8	-72	-2.8
20.5-R25 XGLA (L-2) steel radial	2683	105.6	393	15.5	-81	-3.19

Supplemental Specifications

	Change in Operating weight		Change in Articulated Static Tipping Load	
	kg	lb	kg	lb
Remove cab only, ROPS remains	-177	-390	-134	-295
23.5X25 L-3 16PR	+171	+377	+109	+240
23.5-R25, GP-2B (L-2/3) steel radial	+325	+715	+207	+456
23.5-R25 XHA, (L-3) steel radial	+409	+902	+260	+573
20.5-25, 12 PR (L-2)	-598	-1319	-380	-838
20.5-25, 16 PR (L-2)	-574	-1266	-402	-884
20.5-25, 16 PR (L-3)	-431	-950	-365	-805
20.5-R25, GP-2B (L-2/3) steel radial	-406	-893	-274	-604
20.5-R25, XHA (L-3) steel radial	-364	-803	-231	-510
20.5-R25 XGLA (L-2) steel radial	-536	-1182	-341	-751
Tire ballast 20.5-25 bias ply tires	+819	+1806	+1070	+2354
Tire ballast 23.5-25 bias ply tires	+1171	+2582	+1533	+3373

Note: Tire options include tires and rims.

Standard Equipment

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

Air intake heater	Fenders, front and rear	Seat, suspension (fully adjustable)
Alternator (50-amp)	Fuel priming aid	Seat belt, retractable, 75 mm (3") wide
Automatic bucket positioner	Gauges (coolant, transmission oil and hydraulic oil temperatures, fuel level, tachometer, speedometer and gear range indicator)	Sight gauge (for engine coolant and hydraulic tank)
Automatic lift kickout	Heater/defroster/pressurizer	Starting and charging system (24-volt)
Back up alarm	Horn, steering wheel mounted	Tires (23.5-25) 12 PR (L-2)
Batteries (two 12-volt, 100 amp-hour)	Indicators (engine air filter and clock hour meter)	Transmission neutralizer on/off switch
Brake system (service, parking, secondary)	Key (single key for cab and access doors)	Vandalism protection caplocks
Cab with sound suppression, canopy and rollover protective structure (ROPS)	Lights (front and rear), Halogen	Windshield washers/wipers (front and rear), front intermittent
Caterpillar Monitoring System *	Lock (hydraulic implement control levers)	
Coolers: (engine oil, hydraulic oil and transmission oil)	Muffler	
Counterweight	Precleaner, air intake	
Diagnostic connector	Radiator, multi-row modular	
Drawbar hitch pin	Radio ready, 2-amp converter	
Engine enclosure, locking	Rearview mirrors, interior	

*Functions analyzed by Caterpillar Monitoring System

Category I: Alternator and fuel level

Category II: Coolant, hydraulic oil and transmission oil temperatures

Category III: Engine oil and brake oil 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	73	161	Guards:		
Axle seal guards	85	187	Crankcase	66	146
Buckets	see page 16		Power train	98	217
Cab removed, ROPS remains	-177	-390	High ambient cooling package	48	106
Differentials:			High lift arrangement	830	1830
NoSPIN	1	2	Hydraulic arrangement, three valve	93	205
Limited Slip	5	11	Logging arrangement	93	205
Fender Extension Package			Mirrors, outside mounted	28	62
Field installed attachments:			Payload Measurement System	26	57
Guard, crankcase			Ride Control System	91	200
Guard, power train			Seat, air suspension	32	71
Engine coolant heater, 120-volt, 220-volt			Signal lights, directional	10	22
Lighting system, warning (rotating beacon)			Starting aids		
Mirrors, outside mounted			Engine coolant heater, 120-volt	1.4	3
Emergency starting receptacle			Ether starting aid	1	2
Radio, AM/FM cassette in			Receptacle, 120-volt, 220-volt	1.4	3
fixed mounting or quick release versions			Steering, supplemental	122	268
Voltage converter, 5-amp, 15-25 amp			Tires	see pages 15 & 18	

950F Series II Wheel Loader

AEHQ3796-04 (12-96)
(Replaces AEHQ3796-03)

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