



CATERPILLAR

992B Wheel Loader



ROPS cab shown is standard.



Summary of features

- **550 flywheel horsepower D348 diesel** . . . twin turbocharged. Four valves per cylinder make breathing easier. Engine keeps rated power up to 10,000 ft. (3000 m) elevation.
- **Variable capacity torque converter** . . . lets operator distribute power between hydraulics and drive train to match job requirements.
- **Beadless Tire** option for the tough jobs . . . loading shot rock and long load and carry operations. More work at lower total tire costs.
- **Four-wheel oil-disc brakes** . . . adjustment-free and fade-resistant. Completely sealed from dirt and grit.
- **Pilot valves** with short lever travel and easy actuation activate main hydraulic valves.
- **Center-point articulation** turns 35° in each direction. Rear tires track for lower rolling resistance and less tire scuffing.
- **General purpose and rock buckets** available, each with a rated capacity of 10 cu. yd. (7.65 m³).
- **CAT PLUS** . . . from your Caterpillar Dealer . . . the most comprehensive, total product support system in the industry.



Caterpillar Engine

Flywheel horsepower @ 2000 RPM	550
Kilowatts	410

(Kilowatts (kW) is the International System of Units equivalent of horsepower.)

The net power at the flywheel of the vehicle engine operating under SAE standard ambient temperature and barometric conditions, 85°F (29°C) and 29.38" Hg (995 mbar), using 35 API gravity fuel oil at 60°F (15.6°C). Vehicle engine equipment includes fan, air cleaner, mufflers, water pump, lubricating oil pump, fuel pump and alternator. Engine will maintain specified power up to 10,000 ft. (3000 m) altitude.

Caterpillar 4-stroke-cycle D348 diesel, 60° V-12, 5.4" (137 mm) bore, 6.5" (165 mm) stroke, and 1,786 cu. in. (29.3 litres) displacement.

Precombustion chamber fuel system with individual adjustment-free injection pumps and valves.

Twin turbochargers, parallel manifold porting with two intake and two exhaust valves per cylinder. Stellite-faced valves, hard alloy steel seats, valve rotators.

Cam-ground and tapered aluminum alloy pistons with 3-ring design, cooled by oil spray. Steel-backed aluminum bearings, Hi-Electro hardened crankshaft journals. Pressure lubrication with full-flow filtered and cooled oil. Dry-type air cleaner with primary and safety elements.

24-volt direct electric starting system with glow plugs for preheating precombustion chambers. 50-amp alternator. Two 220 amp-hour 12-volt batteries.

992B

Wheel Loader



transmission

Caterpillar-built planetary type. Full power shift in all three ranges, forward and reverse. Single lever on left side of steering column controls both speed and direction. Rotate the handle for three forward and reverse speeds. Move the lever forward or backward for directional change. A safety lever locks the transmission control in neutral.

Variable capacity torque converter lets operator match rim-pull and hydraulic power to specific application.

Maximum speeds with 6540-39, 30 PR (L-5) tires:

	1st	2nd	3rd
Forward, MPH:	4.8	10.7	25.0
(km/h):	(7.7)	(17.2)	(40.2)
Reverse, MPH:	5.2	11.7	27.1
(km/h):	(8.4)	(18.8)	(43.6)



axles

Front axle fixed, rear axle oscillates $\pm 11^\circ$, total of 22° . One rear wheel can drop or rise a total of 22° (560 mm), with all wheels remaining on ground for maximum traction. Axle shafts can be removed independently of wheels and planetaries for servicing ease. Conventional differentials.



final drives

All-wheel drive with planetary reduction in each wheel. Planetary units may be removed independently of wheels and axle shafts for servicing ease.



brakes

(System meets OSHA regulations.)

Service – Oil disc type on all wheels, completely sealed and adjustment-free.

Braking surface per wheel 3,166 sq. in. (2.04 m²)

Parking or emergency – Dry disc-type parking brake acts on a transfer gear shaft. May be applied manually by operator. Applies automatically in case of low hydraulic pressure; audible and visible alarm warns operator.



steering

Articulated frame. Rear and front wheels track at all times. Full hydraulic power with flow amplified system. Flow to steering cylinders is controlled by a steering wheel-operated metering pump. Full-flow filtering.

Minimum turning radius (over tires) § 29'2" (8890 mm)

Steering angle (each direction) 35°

Hydraulic system – Two 5.5" (140 mm) bore, double-acting cylinders powered by gear-type pump:

Total output @ 2000 RPM with

1000 psi (69 bar) 143 gpm (540 litres/min)

Relief valve setting 2500 psi (172 bar)



tires

Tubeless, wide-base nylon, loader-dozer design.

Choice of:

6540-39, 30 PR (L-5) Extra deep tread rock

6540-39, 30 PR (L-4) Extra tread rock

38.0-39, 30 PR (L-4) Extra tread rock

38.0-39, 30 PR (L-5) Extra tread rock

37.25-35, 30 PR (L-5) Extra deep tread rock

In certain applications, such as load-and-carry work, the productive capabilities of the loader may exceed the ton-MPH capabilities of standard or optional tires. This restriction could be the limiting factor in the use of the vehicle. Caterpillar recommends that the user consult with his tire supplier to evaluate all conditions affecting tire life and costs in order to make proper tire selection.



Beadless Tires

Caterpillar Beadless Tires are an optional arrangement with one-piece complete oval air chamber, helically wound with steel cable and a separate, replaceable, cable-reinforced rubber mounting belt. Steel shoes bolt directly to anchor plates molded into mounting belt. Rim is two-piece, bolted together. 88" (2240 mm) class, with only one ply and no ply rating as such.

Number of shoes 36

Size of shoes 7" x 38" (178 x 970 mm)

Maximum Speeds:

	1st	2nd	3rd
Forward, MPH:	4.4	9.9	23.3
(km/h):	(7.0)	(15.9)	(37.4)
Reverse, MPH:	4.8	10.9	25.3
(km/h):	(7.7)	(17.5)	(40.7)



bucket controls

Control levers actuate pilot valves which operate the main control valves, reducing lever travel and operating effort. The main valves are on the loader tower in a sealed protective enclosure.

Lift circuit – Positions: raise, hold, lower and float. Automatic lift kickout with adjustable lift height.

Tilt circuit – Positions: tilt back, hold and dump. Automatic bucket positioner adjustable to desired loading angle. Automatic adjustable dump kickout to cushion shock or reduce dump angle.



loader hydraulic system

Sealed with full-flow filtering in common with steering system.

Two gear pumps:

Total output @ 2000 RPM and

1000 psi (69 bar), with

SAE No. 10 oil @

150°F (66°C) 220 gpm (830 litres/min)

Relief valve pressure 2500 psi (172 bar)

Cylinders (double acting):

Lift – bore and stroke 10.5 x 55.8" (267 x 1420 mm)

Tilt – bore and stroke 8.5" x 40.5" (216 x 1030 mm)

Hydraulic cycle time, rated load in bucket, in seconds § :

	Raise	Dump	Float down, (empty)	Total
	9.5	2.9	4.2	16.6



service refill capacities

	U.S. Gallons	(litres)
Cooling system	41	(155)
Crankcase	18.75	(71)
Transmission	20.5	(78)
Differential and final drives:		
Front	54.5	(206)
Rear	52.5	(199)
Hydraulic system	225	(850)
Fuel tank	275	(1040)



ROPS

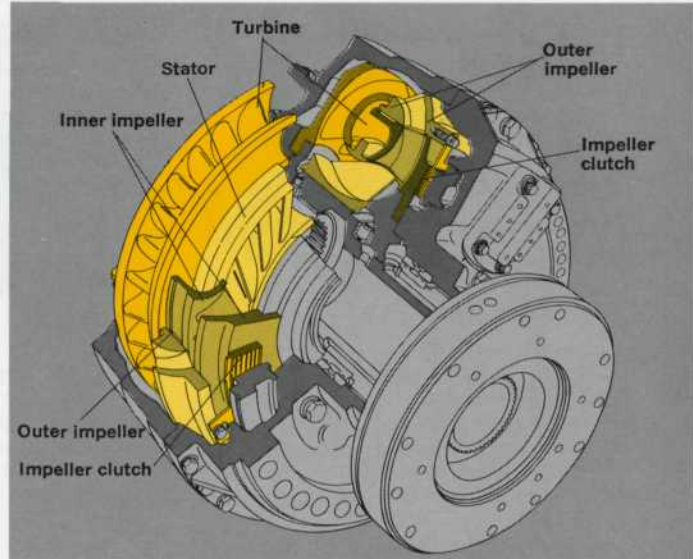
(ROPS cab is standard.)

ROPS (Rollover Protective Structure) offered by Caterpillar for this machine meet ROPS criteria. SAE J394, SAE J1040a and ISO 3471. It also meets FOPS (Falling Object Protective Structure) criteria SAE J231 and ISO 3449.

Specifications and ratings conform to all applicable standards recommended by the Society of Automotive Engineers. SAE Standard J732c (1969) and SAE Standard J742b (1969) govern loader ratings, denoted in the text by (§).

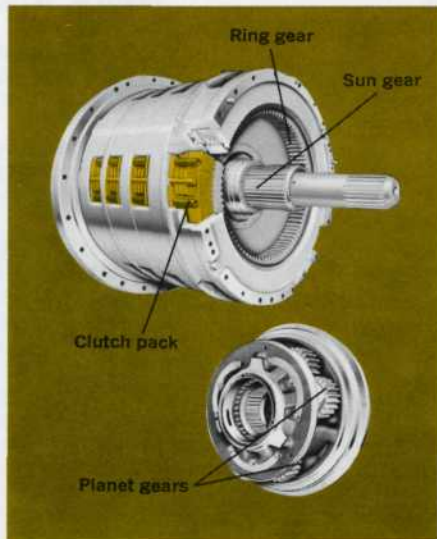


Reliable Cat D348 60° V-12 Diesel Engine, with excellent low speed response necessary for stop and start operations, provides fast cycle times and good loader production. Twin dual overhead camshafts with four valves per cylinder make breathing easy. Twin turbochargers pack more air into cylinders for more power, and enable engine to deliver rated power up to 10,000 ft. (3000 m) altitude. Hydraulically boosted governor gives fast engine response. Individual interchangeable injection pumps for each cylinder require a minimum of service — and large injection valve openings help prevent carbon build-up, even during idling. Resilient mounts isolate engine vibrations and reduce noise levels.

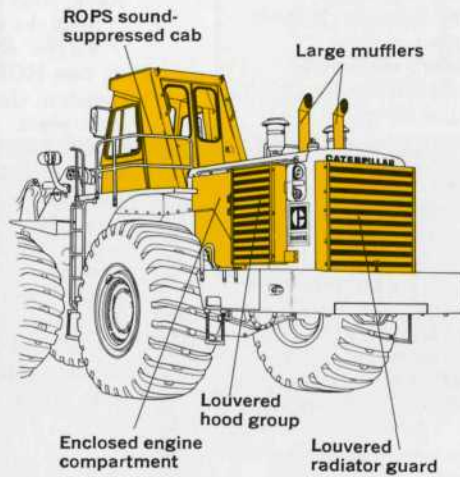


Variable capacity torque converter lets the operator distribute power between hydraulics and the drive train to match job requirements. With a lever controlling a clutch-and-impeller in the torque converter, he can direct additional engine horsepower through the converter (full match) for maximum rimpull. Or he can limit converter power to boost hydraulic system output and control wheel slip when bank loading. Between these two extremes, he can select any setting appropriate to the job.

Two impellers in the torque converter are the key to controlled variable performance. The inner impeller always rotates at engine speed. The outer impeller connects to a clutch, which can gradually engage the impeller to send more or less power through the converter for more or less rimpull.



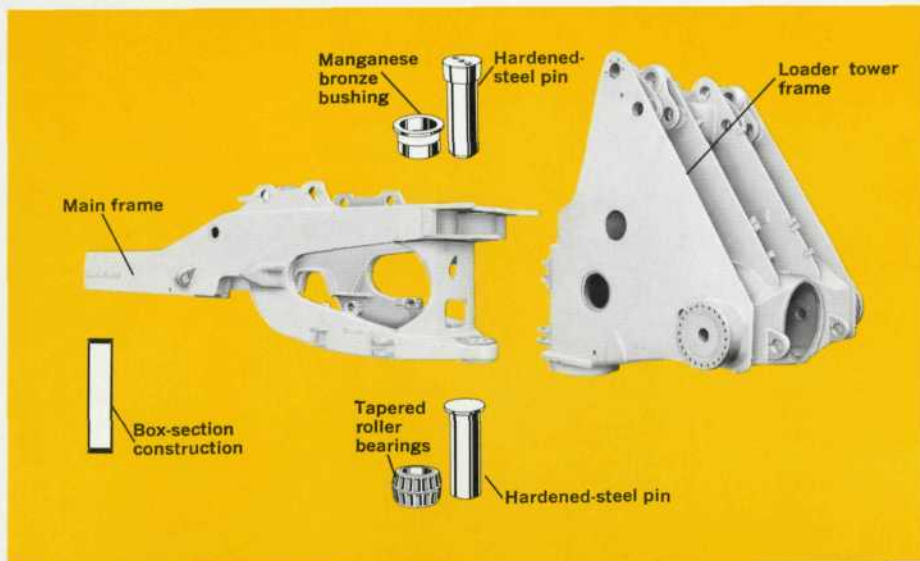
Planetary power shift transmission is designed for tough work . . . with big clutch packs surrounding planetary gear sets. Hydraulic modulation cushions clutch engagement for full-power, on-the-go shifting. Planet gears spaced 120° apart spread out stresses for longer life. Oil cooling and lubrication reduce heat and wearing friction.



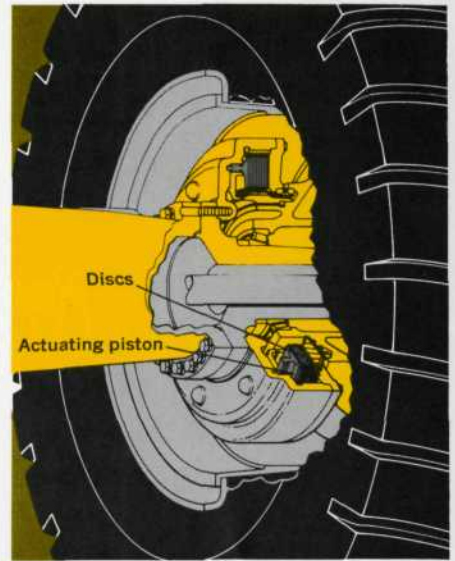
Two sound-treatment attachments are offered for the 992B. Optional cab sound suppression eliminates much of the operator fatigue caused by noise around the job. When properly installed and maintained, this option reduces operator noise level for an eight hour period to comply with OSHA exposure limits. Spectator sound suppression consists of a radiator guard and hood group with sound suppression louvers, completely enclosed engine compartment and large mufflers with exhaust outlets near radiator end.



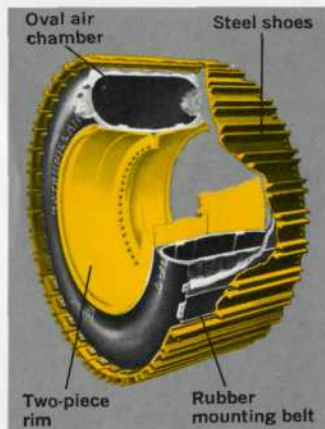
Pin-on ROPS cab offers operator protection and encourages maximum efficiency. It meets all OSHA standards for rollover protection. Resilient mounting strips separate the structure from side enclosures and reduce noise caused by vibration. Pin-on design simplifies field installation and removal.



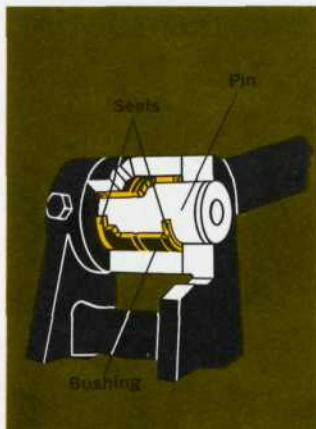
Box-section main frame and loader tower resist twisting and bending on rough ground. Two hardened-steel pins couple the front and rear frames. The bottom pin rides in double-tapered roller bearings; the upper, in a wide-contact manganese bronze bushing. Loader tower has four rolled-steel plates to straddle-mount the lift cylinders, eliminating cantilever mounting stresses and protecting the lift cylinders.



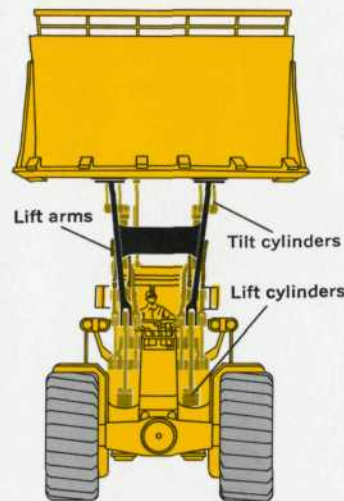
Oil-disc brakes, standard on the 992B, have 3,166 sq. in. (2.04 m²) of braking surface per wheel. Each brake has 6 discs and 5 plates that are cooled by a large reservoir of oil for long life and fade-resistant operation. They are completely sealed, require no adjustment.



Caterpillar Beadless Tires use a unique design that provides increased tire life, reduced total tire costs, greater machine productive capabilities. Steel shoes protect against sudden tire failure from rock cuts and short tread life from abrasion. They bolt directly to a replaceable mounting belt. Oval air chamber carcass is helically wound with tough steel cable for strength and protection. Two-piece rim bolts together for easy assembly.



Sealed loader linkage can extend intervals between greasings to as much as 100 service meter units on lift arm pins and 50 SMU on bucket hinge pins. Lip-type seals on each pin hold the lubricant in and keep out wearing grit. Pins and bushings last longer, and less time and money are spent for routine maintenance.



In-line lift arms, cylinders and linkage transmit hydraulic forces in a straight line to the bucket. Linkage points are supported on both sides to absorb shock loads from the bucket, which can occur any place along the cutting edge.



CAT PLUS — the most comprehensive, total product support system in the industry — comes with every 992B. Your Caterpillar Dealer provides product application counseling and flexible finance planning before you buy, and these services after: Planned inspection and preventive maintenance programs • Parts support • Parts Exchange Service • In-field service • Machine customizing services • Personnel training for operators and mechanics • Cat Care seminars • Complete range of technical assistance.

Operating specifications

Bucket Type Capacity, Rated § (nominal heaped)	General Purpose Straight		V-type Rock	
	Without teeth 10.0 cu. yd. (7.65 m ³)	With teeth 10.0 cu. yd. (7.65 m ³)	Without teeth 10.0 cu. yd. (7.65 m ³)	With teeth 10.0 cu. yd. (7.65 m ³)
Capacity, struck	8.36 cu. yd. (6.39 m ³)	8.36 cu. yd. (6.39 m ³)	8.8 cu. yd. (6.72 m ³)	8.8 cu. yd. (6.72 m ³)
Heaped capacity with optional spill plate extension	10.82 cu. yd. (8.27 m ³)	10.82 cu. yd. (8.27 m ³)	---	---
Cutting edge, width	169.8" (4310 mm)	169.8" (4310 mm)	169.8" (4310 mm)	169.8" (4310 mm)
Dump clearance @ full lift and 45° discharge §	15'2" (4620 mm)	14'4" (4370 mm)	14'3" (4340 mm)	13'5" (4090 mm)
Reach @ 45° discharge angle, 7" (2130 mm) clearance §	9'2" (2790 mm)	9'11" (3020 mm)	9'11" (3020 mm)	10'7" (3230 mm)
Reach @ full lift and 45° discharge §	5'5" (1650 mm)	6'3" (1910 mm)	6'4" (1930 mm)	7'2" (2180 mm)
Overall length §	35' (10 670 mm)	36'2" (11 020 mm)	36'4" (11 070 mm)	37'5" (11 400 mm)
Overall height, (bucket raised) §	26' (7920 mm)	26' (7920 mm)	27'4" (8330 mm)	27'4" (8330 mm)
Loader clearance circle (bucket in carry position) §	64' (19 510 mm)	64' (19 510 mm)	64'5" (19 630 mm)	64'5" (19 630 mm)
Static tipping load, straight * §	99,780 lb. (45 260 kg)	98,680 lb. (44 760 kg)	97,470 lb. (44 210 kg)	96,390 lb. (43 720 kg)
Full 35° turn * §	90,370 lb. (40 990 kg)	89,270 lb. (40 490 kg)	88,100 lb. (39 960 kg)	87,010 lb. (39 470 kg)
Breakout force * §	80,300 lb. (36 420 kg)	79,260 lb. (35 950 kg)	63,070 lb. (28 610 kg)	62,020 lb. (28 130 kg)
Operating weight **	144,520 lb. (65 550 kg)	145,360 lb. (65 935 kg)	146,210 lb. (66 320 kg)	147,060 lb. (66 710 kg)
With Beadless Tires:				
Static tipping load * Straight §	90,220 lb. (40 920 kg)	89,120 lb. (40 420 kg)	87,950 lb. (39 890 kg)	86,870 lb. (39 400 kg)
Full 35° turn §	82,160 lb. (37 270 kg)	81,020 lb. (36 750 kg)	79,930 lb. (36 260 kg)	78,840 lb. (35 760 kg)
Breakout force * §	80,360 lb. (36 450 kg)	79,310 lb. (35 975 kg)	63,110 lb. (28 630 kg)	62,060 lb. (28 150 kg)
Operating weight	147,010 lb. (66 683 kg)	147,850 lb. (67 060 kg)	148,700 lb. (67 450 kg)	149,550 lb. (67 840 kg)

*Measured 4" (102 mm) behind tip of cutting edge with bucket hinge pin as pivot point.

**Static tipping load and operating weight shown include standard cab and 6540-39, 30 PR (L-5) tires with 8,500 lb. (3860 kg) CaCl₂ solution in rear tires.

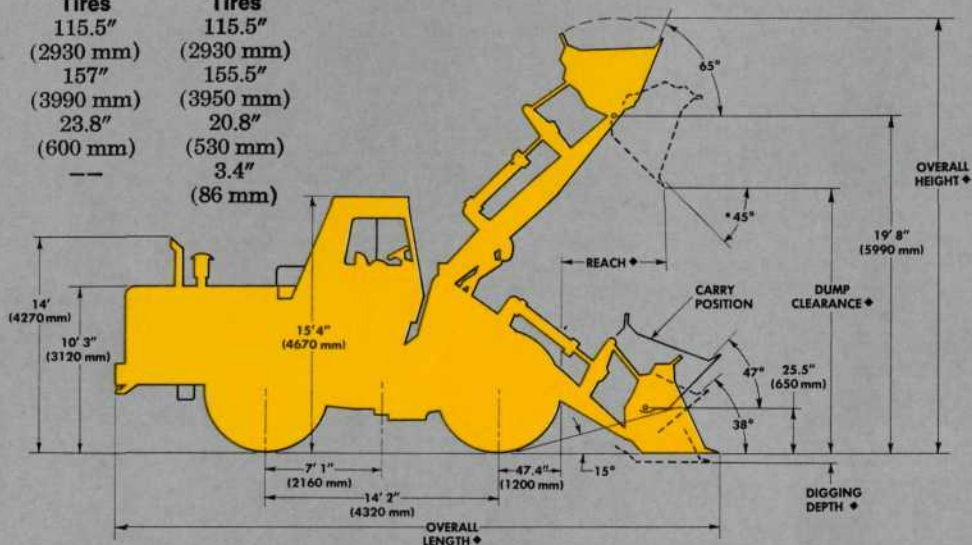
Machine stability is affected by tire size, tire ballast and ROPS cab. Add the following to machine operating weight and static tipping load:

	Change in Operating Weight	Change in Articulated Static Tipping Load
Remove ROPS cab	-3,800 lb. (1720 kg)	-3,300 lb. (1490 kg)
Tires with 75% CaCl ₂ in rear tires:		
37.25-35, 30 PR (L-5)	-1,310 lb. (590 kg)	-1,140 lb. (640 kg)
6540-39, 30 PR (L-4)	-2,120 lb. (960 kg)	-1,290 lb. (590 kg)

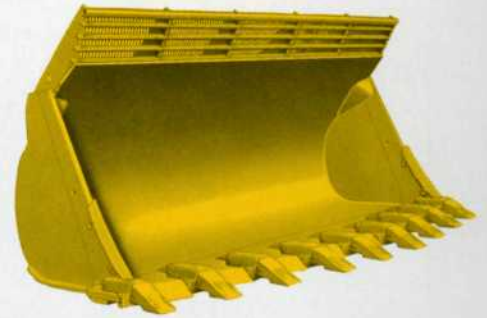
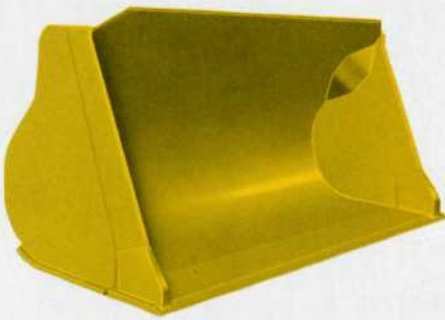


dimensions (approximate)

	37.25-35 Tires	6540-39 (L-5) Tires	Beadless Tires
Tread width	115.5" (2930 mm)	115.5" (2930 mm)	115.5" (2930 mm)
Width over tires	152" (3860 mm)	157" (3990 mm)	155.5" (3950 mm)
Ground clearance	22.9" (580 mm)	23.8" (600 mm)	20.8" (530 mm)
Decrease in vertical dimensions	0.9" (23 mm)	---	3.4" (86 mm)




♦ VARIES WITH BUCKET SIZE - REFER TO OPERATING SPECIFICATIONS




Rock and general purpose buckets are shell-tine constructed from thick, high-resistant steel plate and bracing, joined by deep 100% penetration welds. Sloping floor V-edge rock bucket cutting edge is beveled and 2.25" (57 mm) thick;

general purpose edge is extended and 2" (51 mm) thick. Either bucket is available without teeth or with eight weld-on flush-mounted teeth with replaceable tips. Rock buckets have heavy-duty see-through spill guards.

Rock bucket with Modulok features a quick-change cutting edge which significantly reduces replacement time. The Modulok edge includes replaceable wear plates for longer bucket life and flush-mounted teeth for better work area clean-up. Weld-on adapters are protected by covers, so that the entire edge can be replaced without cutting or welding.


standard equipment

Power shift transmission.	Cab pressurizer.
Variable capacity torque converter.	Stop light.
Sealed loader linkage.	Two 12-volt batteries.
Automatic bucket positioner.	50-amp alternator.
Automatic adjustable dump kickout.	Electric starting.
Automatic lift kickout.	Blower fan.
Tinted front glass.	Ether starting aid.
Windshield wipers and washer.	Mufflers.
Adjustable side windows.	Fuel priming pump.
Adjustable seat.	Dual dry-type air cleaners.
Seat belt.	Transmission filter.
Warning horn.	Gauges and indicators:
Steering wheel spinner knob.	Hydraulic oil level.
ROPS cab.	Hydraulic filter.
Counterweight.	Air cleaner.
Fenders.	Transmission filter.
Vandalism protection locks.	Parking brake.
Rear view mirrors.	Hour meter.
Dash lights.	Torque converter oil temperature.
Tail lights.	Engine water temperature.
Reverse alarm.	Ammeter.
	Engine oil pressure.
	Fuel pressure.
	Hydraulic brake pressure.
	Hydraulic oil temperature.


optional equipment

(with approximate installed weights)

Air conditioner	170 lb. (77 kg)
Beadless Tire Arrangement	See Operating Specifications
Buckets:	
General purpose, with	
8 weld-on teeth	10,740 lb. (4870 kg)
Without teeth	9,880 lb. (4480 kg)
Rock, V-type, with	
8 weld-on teeth	13,520 lb. (6130 kg)
Without teeth	12,620 lb. (5720 kg)
Rock, with Modulok and 9 teeth,	
Straight edge	14,500 lb. (6580 kg)
V-type edge	15,200 lb. (6890 kg)
Cab, non-ROPS (outside U.S.A. only)	712 lb. (320 kg)
Extension, General purpose bucket	
spill plate	430 lb. (195 kg)
Fast-fill fuel system, automatic shut-off	25 lb. (11 kg)
Manual shut-off	3 lb. (1.3 kg)
Guard, crankcase (included in	
spectator sound suppression)	350 lb. (159 kg)
Heater, cab	30 lb. (14 kg)
Engine coolant	20 lb. (9 kg)
Spectator sound suppression	900 lb. (408 kg)
Suspension seat	30 lb. (14 kg)
Starting receptacle	5 lb. (2 kg)
Steering system, supplemental	70 lb. (32 kg)
Teeth, flush-mounted, 8	800 lb. (363 kg)
Tires	See Operating Specifications
Tool kit	18 lb. (8 kg)

Materials and specifications are subject to change without notice.