49145

CATERPILLAR 769B Truck

The 769B is the truck with the low weight-to-horsepower ratio for performance. Yet it has plenty of strength for durability and long life. And it's the truck with the modern features: long-lived oil disc brakes with outstanding downhill performance, a wheel-loader-matched body with excellent load retention, oil-pneumatic suspension for a smooth haul, and short-turning capabilities for maneuverability.
Get performance, day in and day out, with the Cat 769B Truck.

35 tons capacity (32 t) . . . dual-slope body with V-bottom provides large target, low loading height . . . excellent load retention.

Oil-cooled disc brakes are fade resistant . . . completely sealed for life.

Retarding capability . . . 560 horsepower continuous retarding effort is available.

Oil-pneumatic suspension absorbs haul road and loading shocks.

Cat diesel engine delivers 415 flywheel horsepower . . . low 315:1 loaded-vehicle-weight-to-HP ratio.

Power shift transmission shifts automatically in three speed ranges to give nine forward speeds. Top speed: 43 MPH (69 km/h).

Caterpillar engine

Flywheel horsepower @ 1900 RPM	415
Kilowatts	309

(Kilowatts 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″ (995 mbar) Hg., using 35 API gravity fuel oil at 60° F. (15.6° C). Vehicle engine equipment includes fan, air cleaner, water pump, lubricating oil pump, fuel pump, air compressor and alternator. Engine will maintain specified flywheel power up to 5,000 ft. (1500 m) altitude.

Dual-slope main floor with V-bottom. Eight box-section ribs form framework for single thickness, high-tensile, heat-treated steel side, front and bottom plates with 100,000 psi (689 MPa) yield strength. Exhaust heating is standard.

Sidewall plate thickness	.38″ (10 mm)
Front plate thickness	.38″ (10 mm)
Bottom plate thickness	.75″ (19 mm)
Operating width with bolt-on canopy side guards	12′ 10″ (3900 mm)

body hoists

Twin, three-stage hydraulic cylinders, double-acting in third stage.

Pump capacity and pressure	110 gpm@ 2000 psi (416 litres/min @ 138 bar)

weights (approx.)

	lb.	(kg)
Total empty weight	60,760	(27 560)
Chassis with hoists	44,760	(20 300)
Body, empty	16,000	(7260)
Weight distribution		
Empty,		
Front axle, 49%	30,000	(13 600)
Drive axle, 51%	30,760	(13 950)
Loaded (based on 70,000 lb. (31 800 kg) load)		
Front axle, 33%	43,590	(19 770)
Drive axle, 67%	87,170	(39 540)
Total gross weight	130,760	(59 310)

Dimensions are based on 18.00-25 tires. Increase vertical dimensions 3.75″ (95 mm) for 18.00-33 tires.

capacity

Tons	35 (32 t)
Cubic yards, struck (SAE)	22.0 cu. yd. (17 m³)
Heaped (3:1) (SAE)	26.9 cu. yd. (20.5 m³)
Heaped (2:1) (SAE)	29.4 cu. yd. (22.5 m³)
Heaped (1:1) (SAE)	36.4 cu. yd. (28 m³)

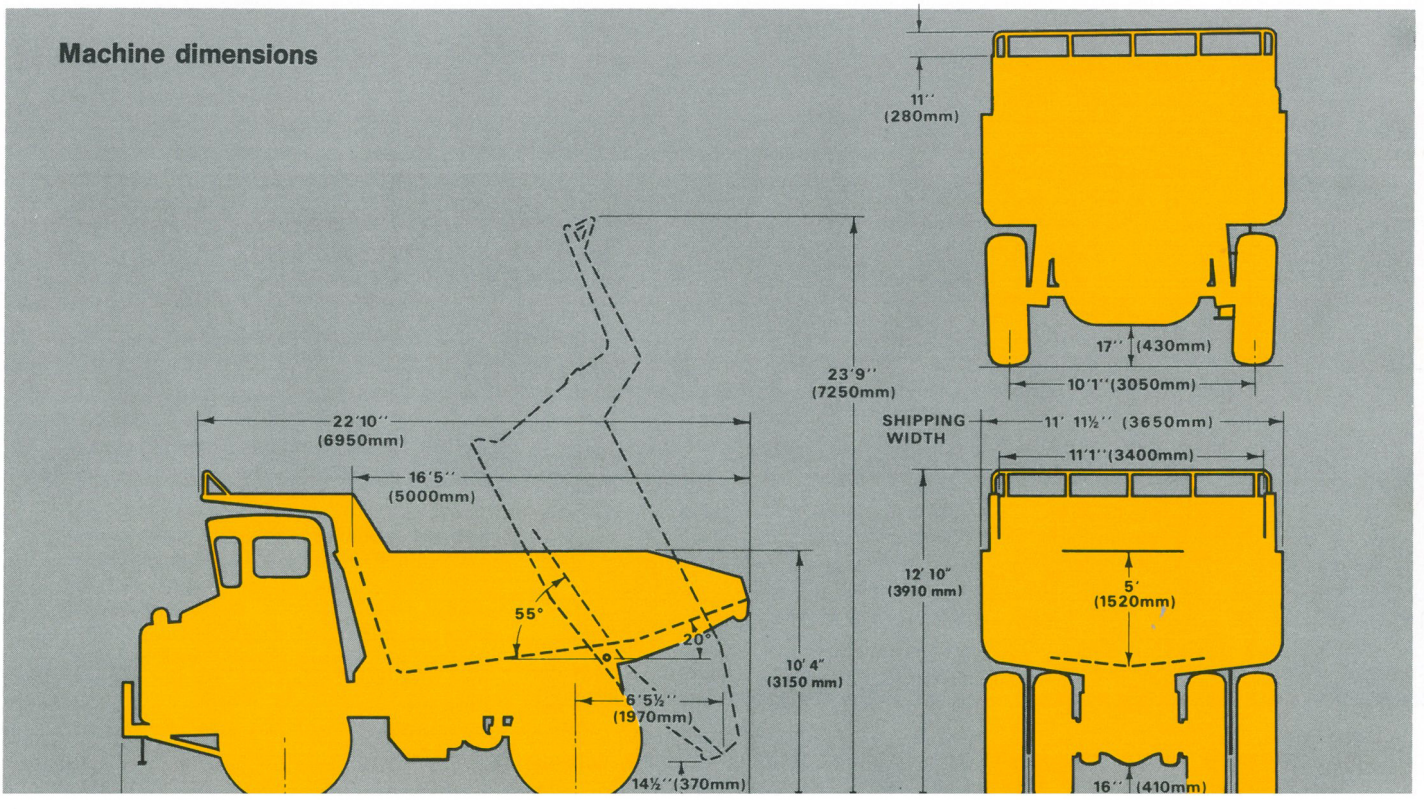
standard equipment

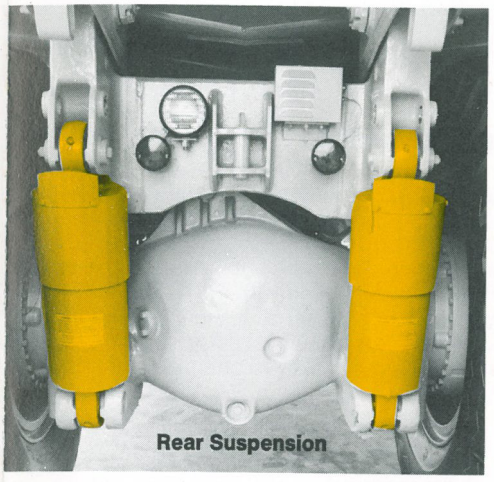
Oil disc brakes (rear). Expander tube brakes (front). Parking brake. Emergency brake system. Back-up alarm. Brake heat exchanger. Crankcase guard. Canopy side guards, bolt-on (shipped not installed). Engine tachometer. Air cleaner service indicator. Heater and defroster. Mirrors, right and left. Adjustable seat. Tinted glass. Rock ejector bars. Sound suppression material. Sun visor. Windshield wipers and washer. Vandalism protection locks. Seat belt.

optional equipment

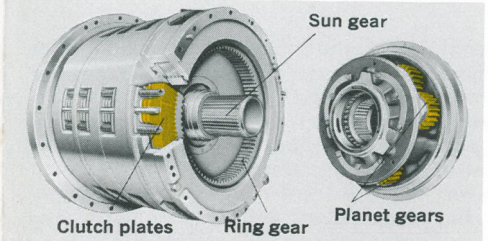
Differential, automatic locking. Downshift inhibitor. Fenders. Fast fuel filler, manual or automatic shutoff. Full suspension seat. Liners, body wear: .38″ (10 mm) bottom and .25″ (6 mm) sides and front, or .75″ (19 mm) bottom and .38″ (10 mm) sides and front. Oil change system, for vacuum drain, pump fill. Recording tachograph. Seat, passenger (includes seat belt). Start receptacle, auxiliary, electric. Steering system, emergency. Tires (see page 2). Tool kit.

Machine dimensions

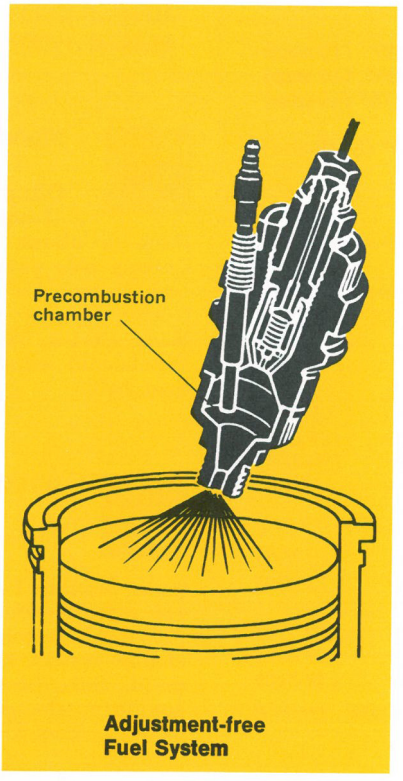




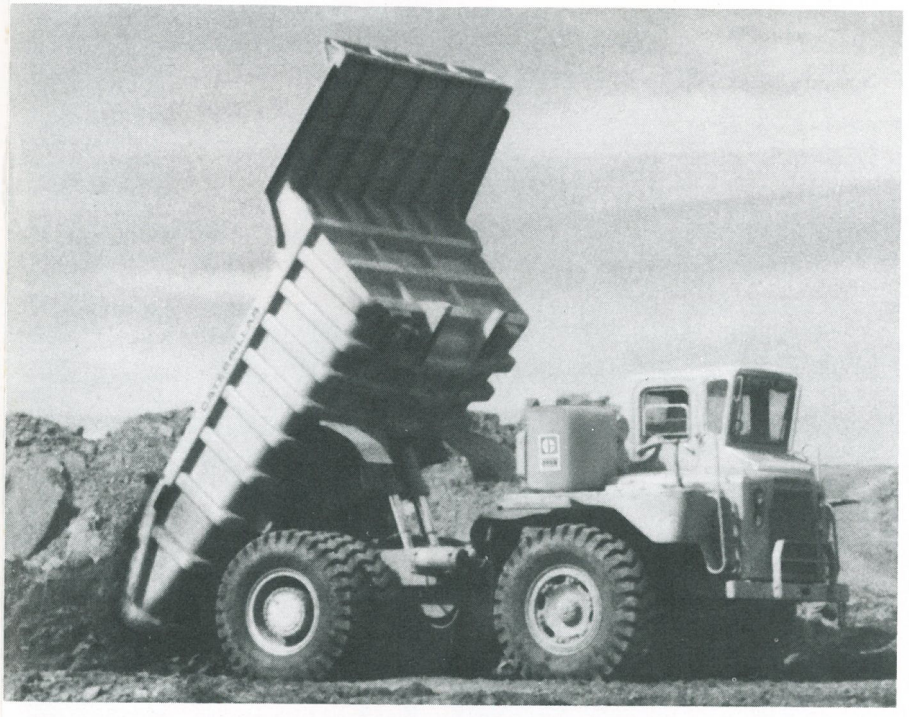
Rear Suspension



Planetary Transmission



Adjustment-free Fuel System



Dual-slope body is designed to retain heaped loads on upslopes with a main floor that slopes forward 8° and a 20° ducktail plate. An 8° longitudinal "V" in the bed lowers the center of the load for more stability and lessens the impact of loaded rock.

Body toughness and strength are built in with 100,000 psi (689 MPa) yield steel for all front, side and bottom plates as well as for body ribs. The 769B has **eight** wrap around ribs closely spaced to give greater side wall support. Optional body liners offer extra protection against extremely abrasive materials and high impact loading. Exhaust, piped through the ribs, heats the body for cleaner dumping of wet, sticky loads.

Cat 415 FWHP D343 diesel has the power to climb steep grades and move fast over the long haul. You can work in altitudes to 5,000 ft. (1500 m) and the 769B will still deliver its full horsepower. Caterpillar's adjustment-free fuel injection system burns fuel efficiently. Individual pumps feed fuel into precombustion chambers for full atomization and efficient burning of all fuels. You don't need to run on premium diesel fuels.

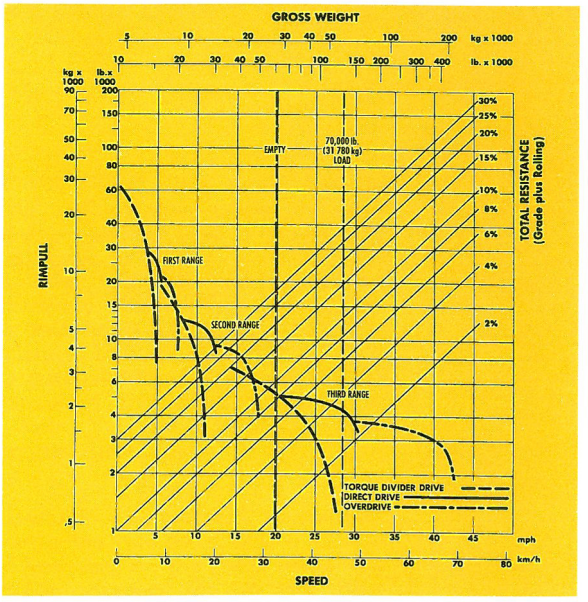
Four-wheel oil-pneumatic suspension smooths the ride for operator comfort and less wear on the truck itself. Suspension cylinders use oil and nitrogen gas under pressure to absorb shocks, reducing twisting forces on the body, frame, and tires. The two rear cylinders are mounted between the frame and the oscillating rear axle; they allow either rear dual to drop or rise 8° to keep all wheels firmly on the ground while rolling over a bump. A rear axle sway bar absorbs lateral thrusts.

Two front suspension cylinders act as steering kingpins to give a short turning circle of 59′ 1″ (18 m) for excellent maneuverability. Optional electric steering lets the operator turn the wheels with a dead engine for emergency control.

Single shift lever controls three forward gear ranges and one reverse range. Within each range a speed sensing valve automatically shifts through torque divider drive, direct drive and overdrive. So you get nine speeds forward and three reverse with only three moves of the control lever. For increased safety, a special valve automatically neutralizes the transmission when the engine is off. This prevents the truck from being started in gear. In addition, the transmission cannot be shifted until the parking brake is released.

Rugged planetary design, with gears 120° apart, reduces load stresses. Gear sets are encircled by large clutch packs which have a surface contact area of 3408 in.^{2} (21 988 cm^2). The plates are continuously cooled and pressure lubricated by oil for longer life.

CATERPILLAR

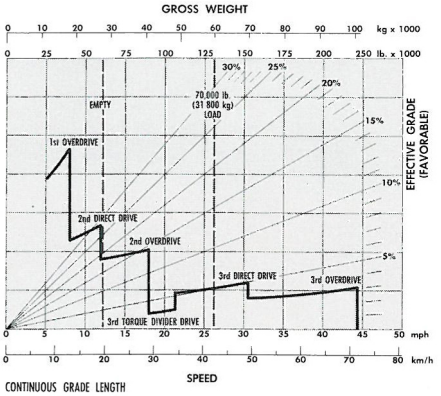


Gradeability-Speed-Rimpull

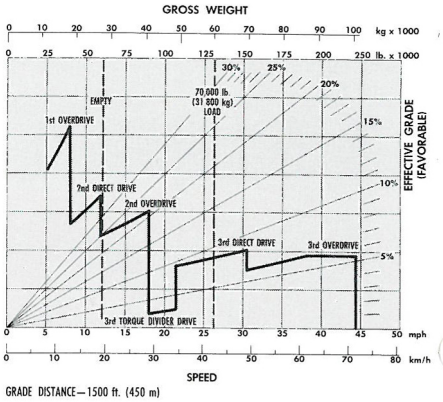
To determine gradeability performance:
Read from gross weight down to the percent of total resistance. (Total resistance equals actual percent grade plus 1% for each 20 lb./ton (10 kg/t) of rolling resistance.) From this weight-resistance point, read horizontally to the curve with the highest obtainable speed range, then down to maximum speed. Usable rimpull depends upon traction available and weight on drive wheels.

Brake Performance

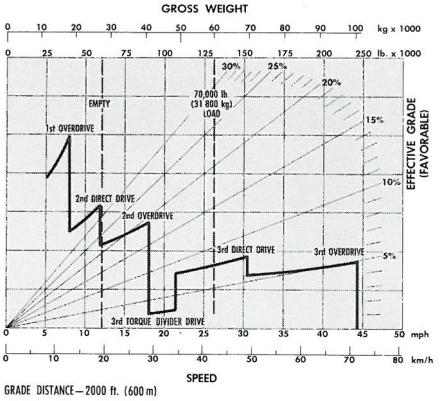
To determine brake performance:
Read from gross weight down to the percent effective grade. (Effective grade equals actual percent grade, minus 1% for each 20 lb./ton (10 kg/t) of rolling resistance.) From this weight-effective grade point, read horizontally to the curve with the highest obtainable speed range, then down to maximum descent speed brakes can safely handle without exceeding cooling capacity. Rated engine RPM should be maintained when braking.



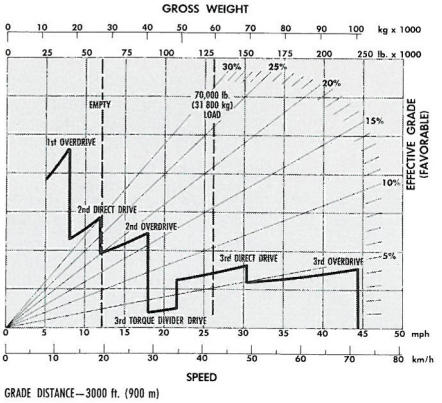
CONTINUOUS GRADE LENGTH



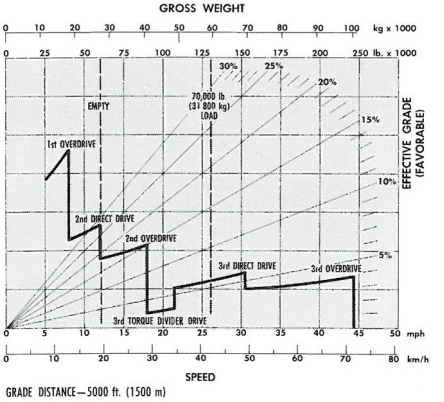
GRADE DISTANCE—1500 ft. (450 m)



GRADE DISTANCE—2000 ft. (600 m)



GRADE DISTANCE—3000 ft. (900 m)



GRADE DISTANCE—5000 ft. (1500 m)

Materials and specifications are subject to change without notice.

AE049145 (3-74)
Replaces AE043697

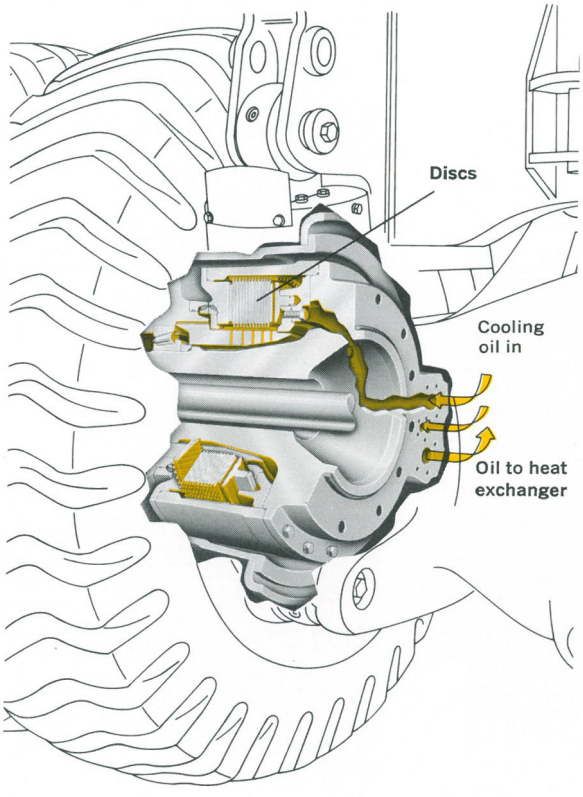
Standard four-wheel service brakes on the 769B include front wheel expander tubes and oil-cooled rear discs. The disc brakes resist fading even with repeated braking. Their life greatly exceeds that of conventional drum-and-shoe brakes. They are completely sealed and require no periodic adjustment. If pressure drops below 60 psi (4.1 bar) in the service/retarder system, a buzzer and red light warn the operator. (Dash-mounted switch enables operator to lock front brakes out of system.) The entire system conforms to OSHA regulations.

Rear disc brakes work as service brakes and retarders – absorbing high torque loads **at the wheels,** reducing stress on the power train. The adjustment-free discs in each rear brake are fade resistant because the oil which surrounds them is continuously cooled by a water-to-oil heat exchanger. A lever on the steering column lets the operator modulate the retarding capacity to descend grades at optimum productive speeds. The operator can also upshift or downshift without releasing the retarder – or he can override the retarder simply by depressing the foot pedal, if more braking is needed. There's a light on the dash to remind the operator the retarder is in use.

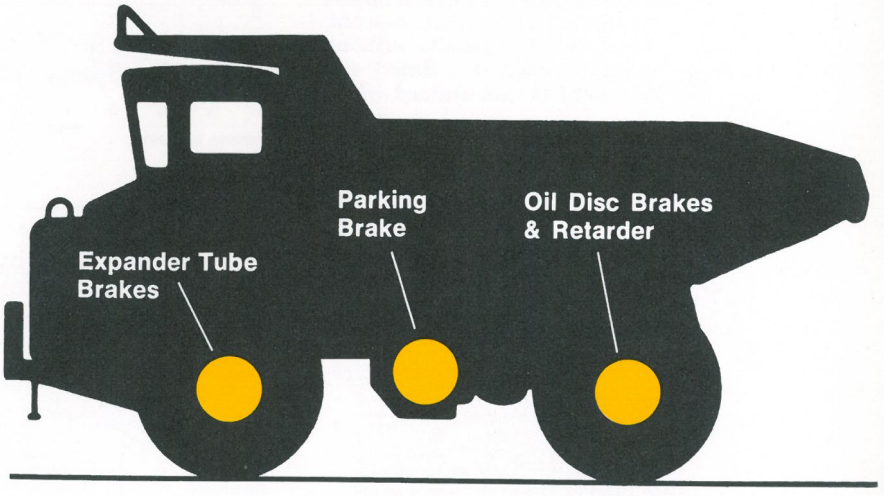
Parking brake is a hand-lever-operated, mechanical shoe brake mounted on the transmission.

Separate air and oil control circuits . . . one for front service brakes, another for rear service, a third for retarder. The service and retarder systems are connected through check valves. If oil pressure drops in one system above the check valve, the other system will activate the rear brakes.

Emergency braking is provided by two independent air reservoirs. The system allows axle-by-axle control for reserve braking on at least one set of wheels. A hand lever on the left side of the steering column allows modulated application of these brakes. If air pressure drops below 80 psi (5.5 bar) in the emergency system, a horn warns the operator. And if pressure in the emergency system after repeated application drops to 45 psi (3.1 bar), the brake will automatically be applied.



Oil Disc Brakes



769B cab now features as standard all-steel construction and sound suppression material. Operator noise level for an 8 hour period complies with OSHA noise exposure limits in effect at the date of manufacture. This compliance was obtained by measuring operator noise exposure while working in a test cycle representative of the type of work usually performed by these machines. (Variables encountered on the job, such as nearby noise sources or noise reflecting surfaces, may reduce the compliance period. If this occurs, ear protective devices may be required for short periods.)