

R1700G

Underground Mining Loader



Engine

Engine Model	Cat [®] C11 ACERT™	
Gross Power – SAE J1995	241/263 kW	323/353 hp

Operating Specifications

Nominal Payload Capacity	12 500 kg	27,558 lb
Gross Machine Operating Weight	52 500 kg	115,745 lb

Bucket Capacities

Bucket Capacity – Std.	5.7 m ³	7.5 yd ³
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R1700G Underground Mining Loader

Engineered for performance. Designed for comfort. Built to last.

Power Train – Engine

The Cat® C11 engine with ACERT™ Technology delivers the power and reliability necessary to perform in the most demanding underground mining applications. Designed for efficient operation, excellent fuel efficiency, lower emissions, reduced engine noise and lower operating costs. **pg. 4**

Power Train – Transmission

The Cat four-speed planetary power shift transmission features heavy duty components to handle the toughest jobs. Electronic controls allow smooth shifting for greater productivity, durability and longer component life. **pg. 5**

Hydraulics

Powerful Cat hydraulics deliver excellent digging and lifting forces to move materials quickly. High volume pumps and large cylinders provide quick, powerful response and fast cycle times. Pilot operated joysticks provide low effort operation and smooth control. **pg. 6**

Serviceability

The R1700G is designed for quick and easy servicing. Simplified service and maintenance features reduce downtime, allowing the machine to spend less time being serviced and more time being productive. **pg. 11**

Customer Support

Caterpillar® dealers provide unmatched product support, anywhere in the world. With industry-best parts availability and a wide range of maintenance and service options, Cat dealers have what it takes to keep your mining machines productive. **pg. 12**

Performance and Agility.

Compact design, high engine power, higher torque rise, stronger components and excellent maneuverability ensures the R1700G is a solid performer.

Unmatched Operator Comfort.

World class operator station fitted with revolutionary electronics and hydraulic controls for low effort operation and increased productivity.



Structures

Structural components are the backbone of the R1700G durability. The heavy duty loader frame is designed and built to absorb twisting, impact and high loading forces for maximum durability and reliability. Z-bar linkage generates powerful breakout forces and optimum loading angle. **pg. 7**

Operator Station

The ergonomic cab is designed for operator comfort and ease of operation to allow the operator to focus on production. Controls and gauges are positioned within easy reach for optimum efficiency and superior control all shift long. **pg. 8**

Buckets

Cat underground loader buckets are designed for optimal loadability and structural durability in tough mining conditions. A ranges of sizes and configurations are available to match material conditions and maximize productivity. **pg. 10**

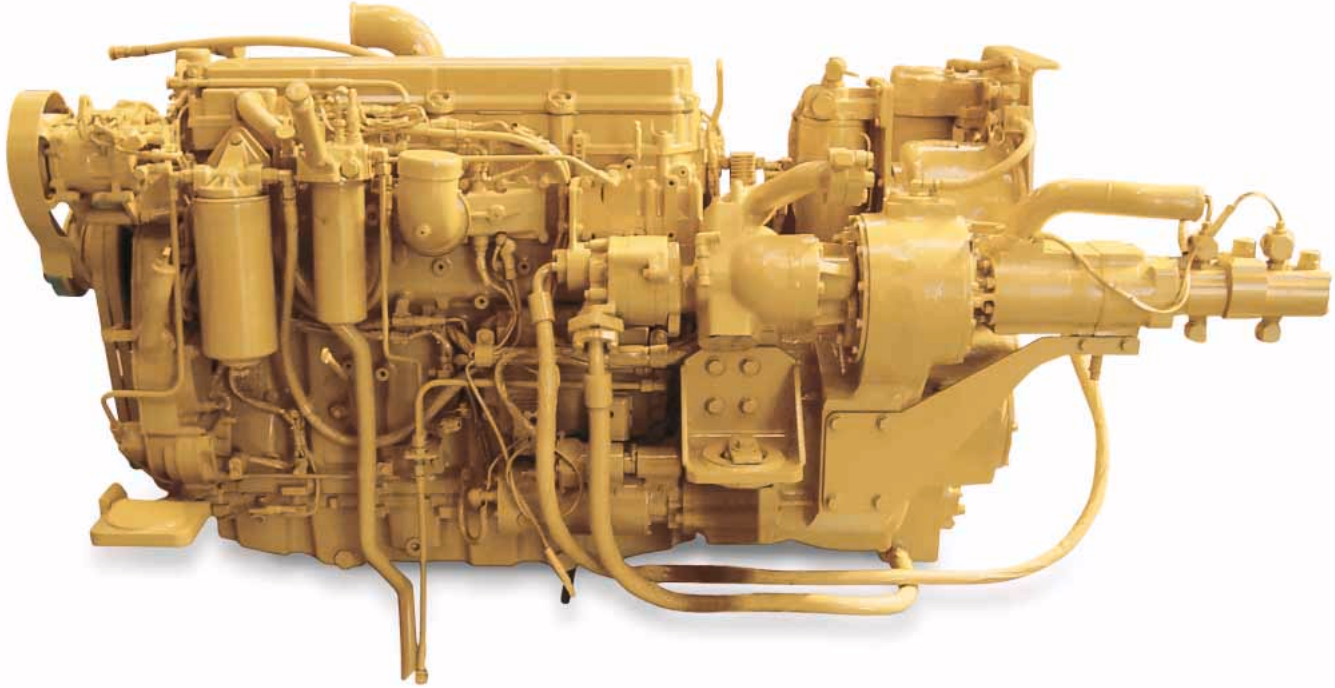
Safety

Caterpillar sets the standard when it comes to safety in the design and manufacturing of heavy equipment for the mining industry. Safety is not an after thought at Caterpillar, but an integral part of all machine and systems designs. **pg. 13**



Power Train – Engine

The Cat® C11 engine with ACERT™ Technology delivers the power and reliability necessary to perform in the most demanding underground mining applications.



Cat C11 Engine with ACERT™

Technology. The Cat C11 engine with ACERT™ Technology is U.S. EPA Tier 3 and EU Stage III compliant. It features efficient fuel management for quick response, high productivity and exceptional service life. A new, sculptured cylinder block provides greater strength and lighter weight.

High Torque Rise. Provides unequalled lugging force while digging, tramming and traversing steep grades. Torque rise effectively matches transmission shift points for maximum efficiency and fast cycle times.

Radiator. Modular radiator with swing-out grill provides easy access for cleaning or repair. Built in sight gauge allows for quick, safe coolant level checks.

Pistons. Oil cooled pistons increase heat dissipation and promote longer piston life.

ADEM™ IV System. Controls the fuel injector solenoids and monitors fuel injection. This system provides automatic altitude compensation and air filter restriction indication.

Turbocharged and Aftercooled. Air-to-air aftercooling provides improved fuel economy by packing cooler, denser air into cylinders for more complete combustion of fuel and lower emissions.

Electronic Unit Injection (EUI).

Proven high-pressure, direct injection fuel system electronically monitors operator demands and sensor inputs to optimize engine performance.

Design Construction. Caterpillar designed one-piece cast iron block provides maximum strength and durability.

Power Train – Transmission

Designed for durability, the Cat power shift transmission delivers smooth, responsive performance and reliability in tough conditions.

Power Shift Transmission.

The Cat four-speed planetary power shift transmission is matched with the C11 engine with ACERT™ Technology to deliver constant power over a wide range of operating speeds.

- Hydraulic modulation cushions transmission shifts and reduces stress on components.
- High contact pump drive and output transfer gears are used to reduce sound levels.
- Pump drive and output transfer use high contact gear ratios to reduce sound levels.
- Perimeter mounted, large diameter clutch packs control inertia for smooth shifting and increased component life.

Robust Design. Designed for rugged underground mining conditions, the proven planetary power shift transmission is built for long life between overhauls.

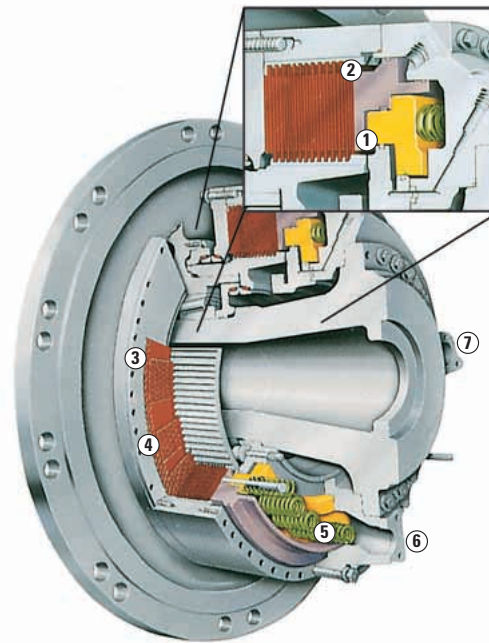
Electronic Controls. Electronic controls allow smooth, on-the-go shifting for greater productivity.

Torque Converter. High capacity torque converter delivers more power to the wheels for superior power train efficiency.

Electronic Autoshift Transmission.

The electronic autoshift transmission increases operator efficiencies and optimizes machine performance. The operator can choose between manual or auto shift modes.

Transmission Neutralizer. Using the left brake pedal, the operator can engage the service brakes and neutralize the transmission, maintaining high engine rpm for full hydraulic flow, enhancing digging and loading functions.



- 1 Parking/Secondary Piston
- 2 Service/Retarding Piston
- 3 Friction Discs
- 4 Steel Plates
- 5 Actuating Springs
- 6 Cooling Oil In
- 7 Cooling Oil Out

Final Drives. Cat final drives work as a system with the planetary power shift transmission to deliver maximum power to the ground. Built to withstand the forces of high torque and impact loads, final drives provide high torque multiplication to further reduce drive train stress.

Axles. Heavy duty axles are built rugged for long-life in the most demanding environments.

Oscillating Rear Axle. Oscillating rear axle ensures four-wheel ground contact for maximum traction and stability at all times.

Differential. No spin rear differential reduces tire wear and maximizes traction in uneven terrain.

Duo-Cone™ Seals. Duo-Cone™ seals between the axle spindle and housings keep lubrication in and contaminants out.

Brakes. Fully enclosed oil immersed disc brakes incorporate independent service and parking brake pistons. Hydraulic actuated independent circuits provide improved performance and reliability.

Cat Electronic Technician. Cat ET service tool provides service technicians with easy access to stored diagnostic data through the Cat Data Link to simplify problem diagnosis and increase availability.

Hydraulics

Cat hydraulics deliver the power and control to keep material moving.



Hydraulic System. Powerful Cat hydraulics deliver exceptional digging and lifting forces for fast cycle times.

Lift and Tilt System. High hydraulic flow rates provide fast hydraulic cylinder response and powerful lift forces. Large-bore tilt and lift cylinders deliver exceptional strength, performance and durability.

Pilot Controls. Low effort, pilot operated joystick implement control with simultaneous lift and tilt functions optimizes operating efficiency.

Optional Ride Control. The optional ride control system uses a nitrogen filled oil accumulator in the hydraulic lift circuit to act as a shock absorber for the bucket and lift arms. The lift arm and bucket response to movement is dampened over rough ground, reducing fore and aft pitch, improving cycle times and load retention. A smoother, more comfortable ride gives operators the confidence to travel at speeds above 5 km/h (3 mph) during load and carry operations.

Cat Hydraulic Hose. Field proven Cat high pressure XT™ hydraulic hoses are exceptionally strong and flexible for maximum system reliability and long life in the most demanding conditions. Reusable couplings with O-ring face seals provide superior, leak free performance and prolong hose assembly life.

Structures

Designed for maximum strength and durability in the harshest operating environments.

Frame Design. The frame features robust structural components for outstanding durability in the toughest loading conditions. Caterpillar integrates advanced processes in the design and manufacture of Cat frames and structures. Computer modeling and Finite Element Analysis (FEA) are used extensively throughout design.

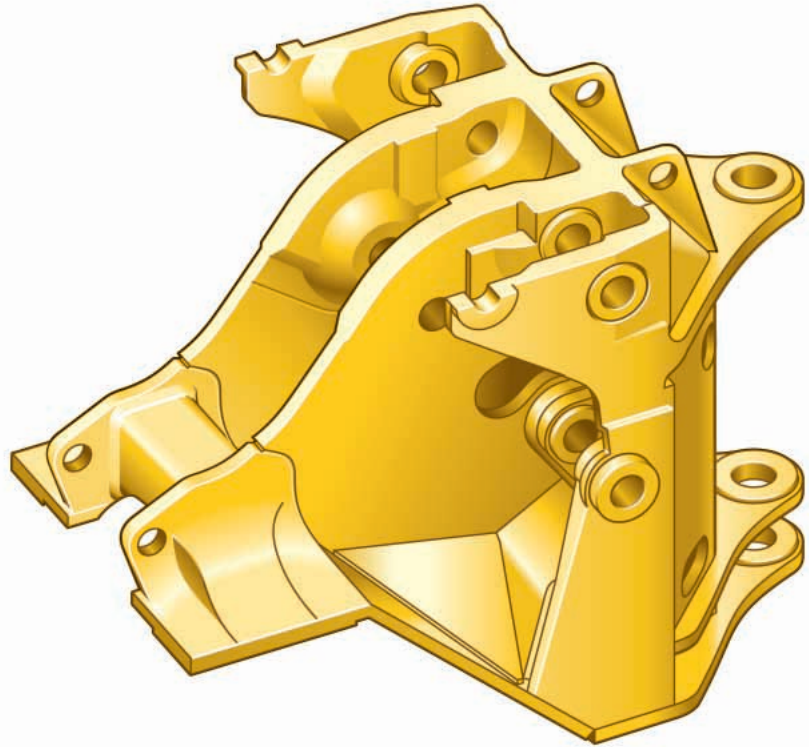
Steel Frame. Strong steel frame structures are designed to resist twisting forces, torsional shock and stresses generated during the loading cycle, while protecting drive line and hydraulic system components.

Lift Arms. Solid steel lift arms absorb high stresses generated during loading without sacrificing strength or durability. The linkage design offers excellent reach and dump clearance for better productivity. Lift arm support pins prevent lowering the lift arms during service and maintenance.

Loader Tower. The four plate loader tower provides a solid mount for lift arms, lift cylinders and Z-bar tilt lever. The loader frame is designed and built to absorb twisting, impact and high loading forces.

Cast-Steel Cross Tube. The cast steel cross tube provides excellent resistance to torsion and impact loads, keeping pin bores aligned and extending component service life.

Z-Bar Loader Linkage. Proven Z-Bar loader linkage geometry generates powerful breakout force and an increased rack back angle for better bucket loading and material retention.



Sealed Pins. Sealed colleted pins are fitted to all bucket and lift arm hinge points for longer pin and bushing life. This reduces maintenance costs and extends service intervals. The sealed joints retain lubrication and prevent contaminant entry.

Hitch. Spread hitch design widens the distance between upper and lower hitch plates to distribute forces and increase bearing life. Thicker hitch plates reduce deflection. The wide opening provides easy service access. Upper and lower hitch pins pivot on roller bearings to distribute horizontal and vertical loads over a greater surface area. Shim adjusted preload reduces maintenance time. An on-board steering frame lock pin is fitted to prevent articulation during maintenance and service.

Operator Station

Setting a new industry standard for comfort and efficiency.



Ergonomic Layout. The operator station is ergonomically designed for total machine control in a comfortable, productive and safe environment. All controls, levers, switches and gauges are positioned to maximize productivity and minimize operator fatigue.

Pilot Controls. Low-effort pilot operated joystick controls integrate steering, transmission and implement functions for smoother, faster cycles with less operator fatigue.

Electronic Autoshift. Electronic autoshift allows the operator to choose automatic or manual shifting. In auto mode, the operator uses a dash mounted switch to select the highest gear they wish the machine to shift to. In this mode, the transmission shifts at factory preset shift points so that each shift occurs at optimum torque and ground speed for maximum machine performance.

Dual-Pedal Braking. The left pedal functions as a brake and a transmission neutralizer so the operator can maintain high engine rpm for full hydraulic flow and fast cycle times.

Protective Structure. The operator station has integrated into its construction a ROPS – Roll-over protective structure and FOPS – Falling object protective structure. This structure is resiliently mounted to the frame, reducing vibration to the operator for a more comfortable ride.

Suspension Seat. Suspension seat provides optimal driving position and enhances operator comfort, all shift long.



STIC™ Steering Control. STIC™ combines directional selection, gear selection and steering into a single lever for maximum responsiveness. Simple side-to-side motion turns machine right or left. Transmission shifting (forward/neutral/reverse) is controlled using a three position rocker switch. The thumb operated upshift and downshift button controls manual shifting.

Optional Enclosed Cab. Optional sound-suppressed ROPS cab provides a quiet, secure working environment. Large window openings offer excellent visibility in all directions. Enclosed design provides fresh, pressurized, temperature-controlled air circulation with air-conditioned comfort and a more comfortable working environment.

Optional Ride Control. The system uses a nitrogen filled oil accumulator in the hydraulic lift circuit to act as a shock absorber for the bucket and lift arms. The lift arm bucket response to movement is dampened over rough ground, reducing fore and aft pitch, improving cycle times and load retention. A smoother, more comfortable ride gives operators the confidence to travel at higher speeds during load and carry applications.

Monitoring System. Caterpillar Electronic Monitoring System (CEMS) continuously provides critical machine data to keep the machine performing at top production levels. A warning system alerts the operator of immediate or impending problems with engine oil pressure, parking brake engagement, brake oil pressure, electrical system, low fuel, hydraulic oil temperature, coolant level/temperature, transmission oil temperature and impending brake application.

• **Message Center.** Three-category warning system alerts operator of abnormal machine health conditions.



• **Gauge Cluster.** Maintains a constant display of vital machine functions, including: engine coolant temperature, hydraulic oil temperature, transmission oil temperature and fuel level.



• **Speedometer/Tachometer Module.** Monitors three systems: engine speed, ground speed and gear indicator.

Buckets

Cat buckets provide the flexibility to match the machine to the material and conditions.



Buckets. Aggressive Cat bucket designs deliver unmatched productivity in the most demanding applications. Underground mining buckets are

designed for optimal loadability and structural reliability to increase productivity and help lower your cost-per-ton.

Bucket Selection. Cat underground loader buckets are available in standard and high penetration configurations to meet a range of loading, hauling and dumping conditions.

Bucket Capacities. Buckets are available in a range of sizes and capacities to suit most material types and densities.

Wear Packages. Weld-on wear plates in high wear areas are standard. Additional wear packages are available, including sacrificial wear strips and Cat heel shrouds, protect the edges from damage for longer bucket life and reduce the need for costly bucket rebuilds.

Cutting Edges. Cat half arrow and cast half arrow cutting edges extend bucket life in high wear applications.

Serviceability

Less time spent on maintenance means more time being productive.

Service Access. Easy access to daily service points simplifies servicing and reduces time spent on regular maintenance procedures.

Ground-Level Access. Allows convenient servicing to all tanks, air filters, lubrication points and compartment drains.

Air Filters. Radial seal air filters are easy to change, reducing time required for air filter maintenance.

Sight Gauges. Fluid level checks are made easier with sight gauges.

Diagnostics. Cat Electronic Technician (Cat ET) Service Tool enables quick electronic diagnosis of machine performance and key diagnostic data for effective maintenance and repairs.

Sealed Electrical Connectors. Electrical connectors are sealed to lock out dust and moisture.

Scheduled Oil Sampling. S•O•SSM sampling valves speed sampling and analysis reliability.



Customer Support

Caterpillar® dealers have what it takes to keep mining underground equipment productive.



Commitment Makes the Difference.

Cat dealers offer a wide range of solutions, services and products that help you to lower costs, enhance productivity and manage your operation more efficiently. Support goes far beyond parts and service. From the time you select a piece of Cat equipment until the day you rebuild, trade or sell it, the support you get from your Cat dealer makes the difference that counts.

Dealer Capability. Cat dealers provide the level of support you need, on a global scale. Dealer expert technicians have the knowledge, experience, training and tooling necessary to handle your repair and maintenance needs, when and where you need them.

Product Support. Cat dealers believe superior products deserve superior support. When Cat products reach the field, they are supported by a worldwide network of parts distribution facilities, dealer service centers, and technical training facilities to keep your equipment up and running. Cat customers rely on prompt, dependable parts availability and expertise through our global dealer network, ready to meet your needs 24/7.

Service Support. Every piece of Cat equipment is designed and built to provide maximum productivity and operating economy throughout its working life. Cat dealers offer a wide range of service plans that will maximize uptime and return on your investment, including:

- Preventive Maintenance Programs
- Diagnostic Programs, such as Scheduled Oil Sampling and Technical Analysis
- Rebuild and Reman Options
- Customer Support Agreements

Technology Products. Cat dealers offer a range of advanced technology products designed to improve fleet efficiency, increase productivity, and lower costs.

www.cat.com. For more information on Cat products, dealer services, and industry solutions, visit us on the web at www.cat.com.

Safety

Caterpillar mining machines and systems are designed with safety as their first priority.

Product Safety. Caterpillar has been and continues to be proactive in developing mining machines that meet or exceed safety standards. Safety is an integral part of all machine and systems designs.

Engine Shut Off Switch. A secondary engine shutoff switch is located at ground level.

Protective Structure. The operator station has integrated into its construction a ROPS – Roll-over protective structure and FOPS – Falling object protective structure. This structure is resiliently mounted to the frame, reducing vibration to the operator for a more comfortable ride.

Brake Systems. Four corner oil-cooled braking system provides excellent control. The service brake system is actuated by modulated hydraulic pressure, while the parking brake function is spring applied and hydraulic released. This system assures braking in the event of hydraulic failure.

Standard Safety Features.

- Interlock
- Anti-skid upper deck surfaces
- Lower cab light
- Ground level compartment sight glasses
- Increased visibility
- 3-point access to cab and machine
- Push out safety glass
- Suspension seat
- Inertia reel retractable seat belt
- Lift arm support pins
- Hot and cold side of engine
- Steering frame lock
- Hinged belly guards
- Firewall
- Shielded Exhaust



Engine

Engine Model	Cat® C11 ACERT™	
Rated Power	1,800 rpm	
Gross Power – SAE J1995	241/263 kW	323/353 hp
Net Power – SAE J1349	218/241 kW	293/353 hp
Net Power – ISO 9249	218/241 kW	293/353 hp
Net Power – 80/1269/EEC	218/241 kW	293/353 hp
Bore	130 mm	5.1 in
Stroke	140 mm	5.5 in
Displacement	11.1 L	680 in ³

- Power ratings apply at a rated speed of 1,800 rpm when tested under the reference conditions for the specified standard.
- Ratings based on SAE J1995 standard air conditions of 25° C (77° F) and 100 kPa (29.61 Hg) barometer. Power based on fuel having API gravity of 35 at 16° C (60° F) and an LHV of 42 780 kJ/kg (18,390 BTU/lb) when engine used at 30° C (86° F).
- Engine derate will commence at an altitude of 3050 m (10,006 ft).
- Compliant with U.S. Environmental Protection Agency Tier 3 emissions standards.

Operating Specifications

Nominal Payload Capacity	12 500 kg	27,558 lb
Nominal Payload Capacity – Trimming	14 000 kg	30,865 lb
Gross Machine Operating Weight	52 500 kg	115,745 lb
Nominal Payload Capacity – Truck Loading	12 500 kg	27,558 lb
Static Tipping Load Straight Ahead Lift Arms Horizontal	31 781 kg	70,065 lb
Static Tipping Load Full Turn Lift Arms Horizontal	26 306 kg	57,995 lb
Breakout Force (SAE)	20 885 kg	46,051 lb

Weights

Empty	38 500 kg	84,878 lb
Front Axle	16 940 kg	37,346 lb
Rear Axle	21 560 kg	47,532 lb
Loaded	51 000 kg	112,436 lb
Front Axle	37 077 kg	81,741 lb
Rear Axle	13 923 kg	30,695 lb
Loaded – Trimming	52 500 kg	115,743 lb

Transmission

Forward 1	4.7 km/h	2.9 mph
Forward 2	8.3 km/h	5.2 mph
Forward 3	14.3 km/h	8.9 mph
Forward 4	24.1 km/h	15 mph
Reverse 1	5.4 km/h	3.3 mph
Reverse 2	9.4 km/h	5.8 mph
Reverse 3	16.4 km/h	10.2 mph
Reverse 4	25.3 km/h	15.7 mph

Hydraulic Cycle Time

Raise	6.8 Seconds
Dump	2.9 Seconds
Lower, empty, float down	2.4 Seconds
Total Cycle Time	12.1 Seconds

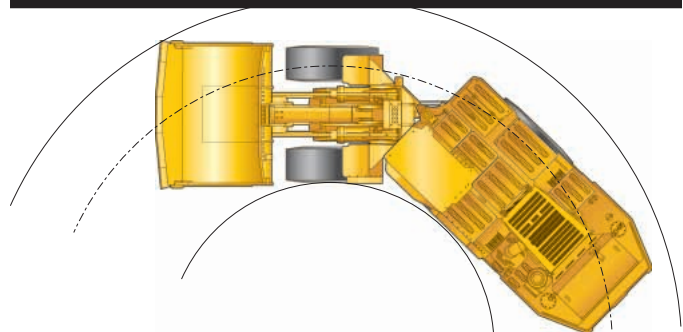
Bucket Capacities

Bucket Capacity – Std.	5.7 m ³	7.5 yd ³
Bucket Width (Over cutting edge)	2772 mm	109.1 in
Bucket Capacity – Optional	4.6 m ³	6 yd ³
Bucket Capacity – Optional	5 m ³	6.5 yd ³
Bucket Capacity – Optional	6.6 m ³	8.6 yd ³
Bucket Capacity – Optional	7.3 m ³	9.5 yd ³
Bucket Capacity – Optional	8.8 m ³	11.5 yd ³
Bucket Capacity – Optional (Ejector)	5.6 m ³	7.3 yd ³

Turning Dimensions

Outside Clearance Radius**	6878 mm	270.8 in
Inner Clearance Radius**	3229 mm	127.1 in
Axle Oscillation	8°	
Articulation Angle	44°	

**Note: Clearance Dimensions are for reference only.



Tires

Tire Size	26.5 × 25 36 PLY STMS L5S
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Service Refill Capacities

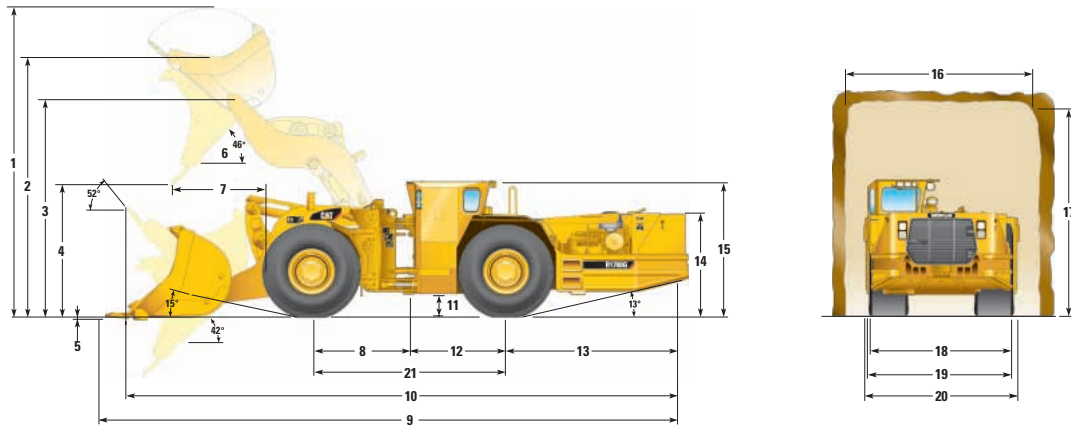
Engine Crankcase with Filter	34 L	8.98 gal
Transmission	47 L	12.4 gal
Hydraulic Tank	125 L	33 gal
Cooling System	63 L	16.6 gal
Front Differential and Final Drives	61 L	16.1 gal
Rear Differential and Final Drives	61 L	16.1 gal
Front Differential and Final Drives (With Axle Oil Cooler)	90 L	23.8 gal
Rear Differential and Final Drives (With Axle Oil Cooler)	90 L	23.8 gal
Fuel Tank	570 L	150.5 gal
Secondary Fuel Tank (If Equipped)	420 L	111 gal

Standards

Brakes	ISO3450, AS2958.1, CAN-CSA424.30-M90
Cab/FOPS	BS EN ISO3449, SAEJ231, AS2294.3
Cab/ROPS	ISO3471, SAEJ1040, AS2294.2, EN13510

Dimensions

All dimensions are approximate.



	256-0862	255-9970*	252-7194* (Standard Bucket)	226-5404*	256-0356*	256-0386	281-0445 Ejector Bucket
Bucket capacity	4.6 m ³ (6.0 yd ³)	5.0 m ³ (6.5 yd ³)	5.7 m ³ (7.5 yd ³)	6.6 m ³ (8.6 yd ³)	7.3 m ³ (9.5 yd ³)	8.8 m ³ (11.5 yd ³)	5.6 m ³ (7.3 yd ³)
Bucket width over cutting edge	2672 mm (8'9")	2672 mm (8'9")	2772 mm (9'1")	2932 mm (9'7")	2982 mm (9'9")	3492 mm (11'6")	2780 mm (9'1")
1 Overall height – bucket raised	5511 mm (18'1")	5511 mm (18'1")	5606 mm (18'5")	5680 mm (18'8")	5751 mm (18'10")	5751 mm (18'10")	5858 mm (19'3")
2 Maximum dump height	4899 mm (16'1")	4899 mm (16'1")	4899 mm (16'1")	4899 mm (16'1")	4899 mm (16'1")	4899 mm (16'1")	4913 mm (16'1")
3 Bucket pin height at maximum lift	4104 mm (13'6")	4104 mm (13'6")	4104 mm (13'6")	4104 mm (13'6")	4104 mm (13'6")	4104 mm (13'6")	4104 mm (13'6")
4 Dump clearance at maximum lift	2648 mm (8'8")	2524 mm (8'3")	2443 mm (8'0")	2392 mm (7'10")	2320 mm (7'7")	2320 mm (7'7")	2352 mm (7'9")
5 Digging depth	5 mm (0.2")	15 mm (0.6")	20 mm (1")	26 mm (1")	33 mm (1")	33 mm (1")	76 mm (3")
6 Dump angle at maximum lift	46°	46°	46°	46°	46°	46°	46°
7 Reach	1526 mm (5')	1639 mm (5'5")	1741 mm (5'8")	1768 mm (5'10")	1836 mm (6')	1836 mm (6')	1738 mm (5'8")
8 Centerline of front axle to centerline of hitch	1840 mm (6')	1840 mm (6')	1840 mm (6')	1840 mm (6')	1840 mm (6')	1840 mm (6')	1840 mm (6')
9 Overall length (digging)	10 746 mm (35'3")	10 915 mm (35'10")	11 035 mm (36'2")	11 105 mm (36'5")	11 207 mm (36'9")	11 207 mm (36'9")	11 132 mm (36'6")
10 Overall length (tramming)	10 447 mm (34'4")	10 549 mm (34'7")	10 589 mm (34'9")	10 663 mm (35')	10 724 mm (35'2")	10 724 mm (35'2")	10 706 mm (35'1")
11 Ground clearance	429 mm (1'5")	429 mm (1'5")	429 mm (1'5")	429 mm (1'5")	429 mm (1'5")	429 mm (1'5")	429 mm (1'5")
12 Centerline of back axle to centerline of hitch	1840 mm (6')	1840 mm (6')	1840 mm (6')	1840 mm (6')	1840 mm (6')	1840 mm (6')	1840 mm (6')
13 Length – rear axle to bumper	3439 mm (11'3")	3439 mm (11'3")	3439 mm (11'3")	3439 mm (11'3")	3439 mm (11'3")	3439 mm (11'3")	3439 mm (11'3")
14 Height to top of hood	1968 mm (6'6")	1968 mm (6'6")	1968 mm (6'6")	1968 mm (6'6")	1968 mm (6'6")	1968 mm (6'6")	1968 mm (6'6")
15 Height to top of ROPS	2557 mm (8'5")	2557 mm (8'5")	2557 mm (8'5")	2557 mm (8'5")	2557 mm (8'5")	2557 mm (8'5")	2557 mm (8'5")
16 Tunnel clearance width**	4000 mm (13'1")	4000 mm (13'1")	4000 mm (13'1")	4000 mm (13'1")	4000 mm (13'1")	4000 mm (13'1")	4000 mm (13'1")
17 Tunnel clearance height**	4000 mm (13'1")	4000 mm (13'1")	4000 mm (13'1")	4000 mm (13'1")	4000 mm (13'1")	4000 mm (13'1")	4000 mm (13'1")
18 Overall tire width	2650 mm (8'8")	2650 mm (8'8")	2650 mm (8'8")	2650 mm (8'8")	2650 mm (8'8")	2650 mm (8'8")	2650 mm (8'8")
19 Overall width excluding bucket	2689 mm (8'10")	2689 mm (8'10")	2689 mm (8'10")	2689 mm (8'10")	2689 mm (8'10")	2689 mm (8'10")	2689 mm (8'10")
20 Overall width including bucket	2790 mm (9'2")	2790 mm (9'2")	2894 mm (9'6")	3050 mm (10'0")	3104 mm (10'2")	3610 mm (11'10")	2902 mm (9'6")
21 Wheelbase	3680 mm (12'1")	3680 mm (12'1")	3680 mm (12'1")	3680 mm (12'1")	3680 mm (12'1")	3680 mm (12'1")	3680 mm (12'1")

*Dimensions shown with standard material bucket sizes. High penetration bucket versions also available.

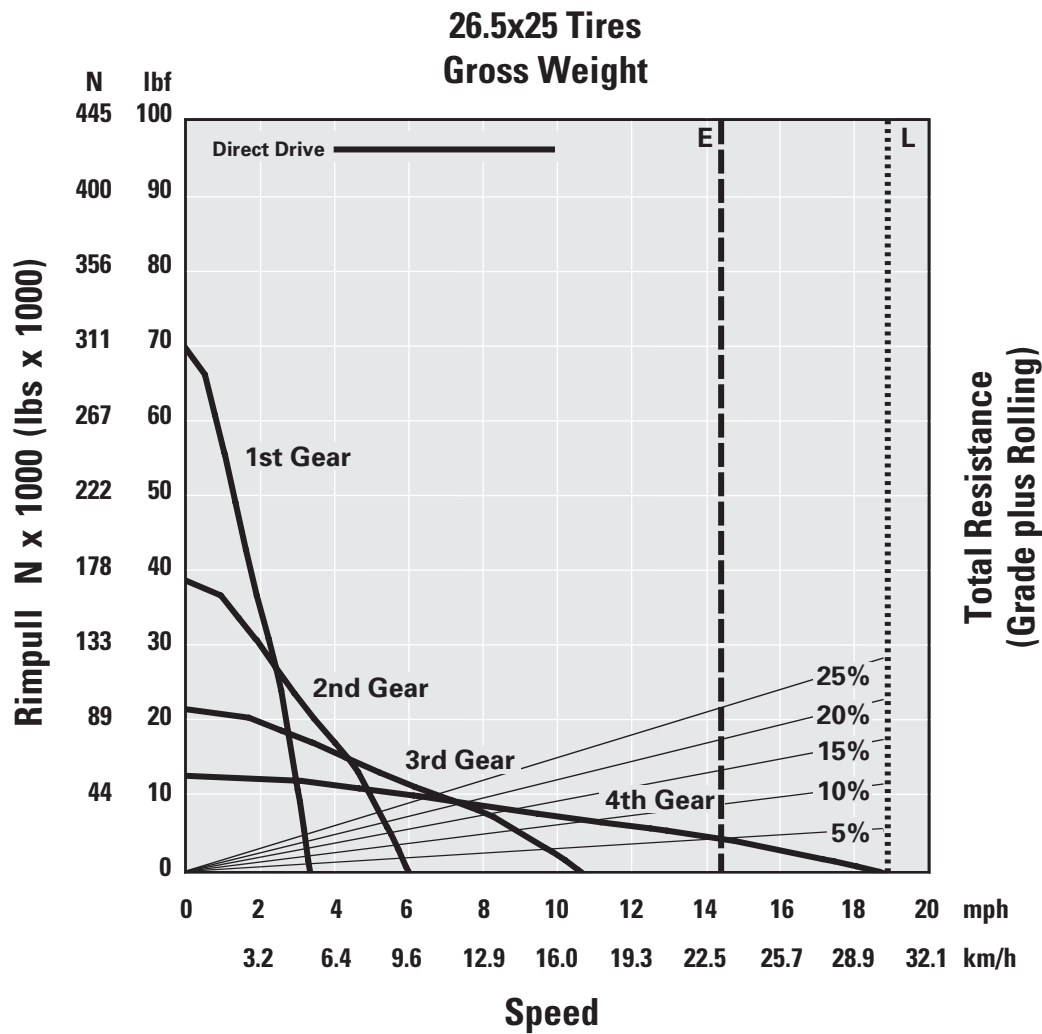
**Clearance dimensions are for reference only.

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 rolling resistance. As a general guide use 2% for rolling resistance in underground applications or refer to the Caterpillar Performance Handbook. From the

total resistance point, read horizontally to the curve with the highest obtainable gear, then down to maximum speed. Usable rimpull will depend upon traction available and weight on drive wheels.

----- Typical Field Empty Weight
..... Loaded Weight



E – Empty 38 500 kg (84,878 lb)
L – Loaded 51 000 kg (112,436 lb)

Standard Equipment

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

Electrical

- Alternator, 95-amp
- Battery Disconnect Switch, Ground Level
- Corrosive Protection Spray
- Diagnostic Connector
- Electric Starting, 24-volt
- Engine Shutdown Switch
- External Lighting System, Front, Rear
- Low Maintenance Batteries
- Reversing Alarm
- Starting And Charging System

Operator Environment

- Caterpillar Electronic Monitoring System (CEMS)
- Electric Horns
- Gauges
 - Engine Coolant Temperature
 - Fuel Level
 - Hydraulic Oil Temperature
 - Speedometer
 - Tachometer
- Pilot Hydraulic Implement Controls, Single Joystick
- ROPS/FOPS Structure
- Suspension Seat With Retractable Seat Belt
- Wheel Steer

Power Train

- Cat C11 ATAAC Diesel Engine with ACERT™ Technology, 6-Cylinder
- Long Life Coolant
- SAFR™ Full Hydraulic Enclosed Wet Multiple-Disc Brakes
- Planetary Powershift Transmission with Automatic Shift Control, 4 Speed Forward/4 Speed Reverse
- Engine Air Intake Precleaner
- Torque Converter
- Transmission Neutralizer
- Fuel Priming Aid
- Crossflow radiator

Other Standard Equipment

- Bucket Positioner, Return To Dig
- Catalytic Exhaust Purifier/Muffler Group
- Engine And Transmission Belly Guards
- Fenders, Front, Rear
- Firewall
- Hardox 450 Bucket Lip
- Rear Frame Protection Wear Bars 100 × 50 mm (4 × 2 in)
- Semi Centralized Lubrication Points
- Swing Out Radiator Grill
- Tires, 26.5 × 25 36 PLY STMS L5S

Optional Equipment

Optional equipment may vary. Consult your Caterpillar dealer for details.

Alternative Tire Arrangements
Automatic Lube System
Auxiliary Start Receptacle
Brake Light
Brake Pressure Gauges
Brake Release Arrangements
Bucket Heel Shrouds
Bucket Sacrificial Wear Strip Package
Centralized Lube System, Manual
Draw Bar Attachment, Bolt-on
Electronic Access Module
Fast Fill System
 Coolant
 Engine
 Fuel
 Hydraulic
 Transmission
Fire Extinguishers
Fire Suppression System
Front Light Protectors

Heater, Air Conditioning
Oil Sample Adapters
Operators Station
 Air Conditioning
 Pressurizer
 Dome Light
 Radio Ready
Payload Control System (PCS)
Remote Activated Fire System
Remote Control Systems
 Proportional
 Retrieval attachment
Reversible Steering, Wheel Steer
Ride Control System
Seat Covers
Secondary Steering System
Service Tools
STIC™ Steering
Tee Seat

R1700G Underground Mining Loader

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