

# 777G

## Off-Highway Truck



### Engine (Tier 4 Final)

|                         |                 |          |
|-------------------------|-----------------|----------|
| Engine Model            | Cat® C32 ACERT™ |          |
| Gross Power – SAE J1995 | 765 kW          | 1,025 hp |
| Net Power – SAE J1349   | 683 kW          | 916 hp   |

### Engine (Tier 2 Equivalent)

|                         |                 |          |
|-------------------------|-----------------|----------|
| Engine Model            | Cat® C32 ACERT™ |          |
| Gross Power – SAE J1995 | 765 kW          | 1,025 hp |
| Net Power – SAE J1349   | 704 kW          | 945 hp   |

### Weights – Approximate (Tier 4 Final)

|                             |            |            |
|-----------------------------|------------|------------|
| Target Gross Machine Weight | 164 654 kg | 363,000 lb |
|-----------------------------|------------|------------|

### Weights – Approximate (Tier 2 Equivalent)

|                             |            |            |
|-----------------------------|------------|------------|
| Target Gross Machine Weight | 164 654 kg | 363,000 lb |
|-----------------------------|------------|------------|

### Operating Specifications (Tier 4 Final)

|                               |                     |                      |
|-------------------------------|---------------------|----------------------|
| Nominal Payload (100%)        | 90.4 tonnes         | 99.6 tons            |
| Maximum Payload (110%)        | 99.4 tonnes         | 109.6 tons           |
| Not to Exceed Payload (120%)* | 108.5 tonnes        | 119.6 tons           |
| Body Capacity – SAE 2:1       | 64.1 m <sup>3</sup> | 83.8 yd <sup>3</sup> |

### Operating Specifications (Tier 2 Equivalent)

|                              |                     |                      |
|------------------------------|---------------------|----------------------|
| Nominal Payload (100%)       | 90.8 tonnes         | 100 tons             |
| Maximum Payload (110%)       | 99.8 tonnes         | 110 tons             |
| Not to Exceed Payload (120%) | 109 tonnes          | 120 tons             |
| Body Capacity – SAE 2:1      | 64.1 m <sup>3</sup> | 83.8 yd <sup>3</sup> |

• Capacity with flat floor X Body with liner.

\* Refer to the Caterpillar 10/10/20 Payload Policy for maximum gross vehicle weight limitations.

## Features

### G Series Customer Requirements

- meet safety and regulatory requirements
- machine available when scheduled to work
- performance that promotes low owning and operating costs
- provide an operating environment that enhances productivity

### G Series Quality

G Series is backed by comprehensive virtual validation, prototype testing and over 25,000 hours of work in the hands of customers prior to production.

### G Series Performance

The 777G has 7% more torque and new transmission controls that deliver quick haul cycles with automotive-quality shifting and comfort.

### G Series Economics

G Series introduces new fuel saving strategies and component life goals to help manage life cycle costs.

### G Series Safety

With improved designs that impact braking, traction control, object detection and egress, G Series is setting new standards of safety in this size class of truck.

### Sustainable Designs

The 777G reaches new levels of sustainability using less fuel, producing fewer emissions for the U.S. and reducing sound levels by 50% for the operator.

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Since its introduction, in 1977, the Cat® 777 off-highway truck has set the standard in the industry for durability and value. With the introduction of the G Series, Caterpillar introduces a truck with new levels of performance, productivity, and operator comfort.

The 777G has new ways to save fuel and extend filter and component life, helping customers manage their life cycle costs.

Available as either U.S. EPA Tier 4 Final for the U.S. and Canada or Tier 2 Equivalent for all other regions, the 777G is ready to work.

# The Operator Experience

Best in the industry

## Operator Confidence

- Ergonomics that put controls within reach
- New braking performance and design
- Engine braking option for Automatic Retarding Control
- Improved retarder lever ergonomics and activation
- Mirror options including heated and concave
- Seating that adjusts to individual needs with suspension and three point harness
- Seating for trainer or folds up for additional work space
- In-cab fluid level monitoring
- VIMS™ machine event warnings and messaging

## Operator Comfort

- Industry leading access system, with low effort climbing and three points of contact
- Exceptionally smooth machine performance
- Quiet, sound reduced environment
- Automatic temperature control
- Cat Comfort Seat is Series III with vibration reduction
- Electric window – left side
- New foot rest addition

## Operator Safety

- Emergency egress out right side, hinged window
- Enhanced ROPS/FOPS design
- Secondary braking
- Ground level daily checks
- TKPH/TMPH tire monitoring system
- Warnings via Advisor display
- Body up speed limited, can be set by customer
- New tread plate design on access system; better traction; sheds material from walkways





# Performance

Intelligent application of power and technology

## Power

The Cat C32 ACERT™ diesel engine is delivering 7% more torque to the drive train. As a result, a more robust rear axle housing with optional filtration and force lubrication have been designed to handle the higher levels of performance.

## Technology

G Series introduces a new planetary powershift transmission control strategy called APECS. APECS takes the benefits of ECPC (Electronic Clutch Pressure Control) and adds part throttle shifting and torque shift management. The result is exceptionally smooth automotive-type shifting and ride quality. APECS also retains torque and momentum through the shifts; increasing performance on grades. The result is quick starts from a stand still and exceptionally smooth shift and ride quality.

## Intelligence

The Traction Control System on G Series trucks is now steering sensitive to differentiate between tire spin or high speed turns. The system uses the hydraulically applied service brakes (vs. spring applied secondary brakes) allowing it to engage sooner and at lower speeds. The benefit is a return to traction sooner, reducing tire wear and preserving cycle times.

# Fuel Saving Strategies

Solutions that support your lowest cost per ton

## Fuel Saving Strategies

- **Standard Economy Mode** – G Series can adjust engine power based on your individual needs. With this feature, fuel savings are achieved by reducing power between 0.15 to 15 percent.
- **Adaptive Economy Mode** – New for G Series – requires a baseline for production from you. As the truck goes through the haul cycle, it constantly evaluates your baseline against opportunities to reduce power and save fuel. It's fully automatic with no special operation required.
- **Speed Limiting** – while you can continue to gear limit your G Series trucks, Caterpillar offers another alternative you can utilize which is the new speed limiting feature. Speed limiting allows the truck to travel at a more efficient engine speed and gear selection.
- **Auto Neutral Idle** – as the 777G waits for the loader or crusher while idling in a forward gear, the transmission will automatically slip into a neutral state to avoid stalling the torque converter and raising engine rpm. As soon as the operator releases the brake or applies throttle, the truck is instantly back in the forward gear.
- **Engine Idle Shutdown** – when your G Series truck is in park and idles for more than a preset time, the truck will initiate engine shutdown to conserve fuel. This feature can be time adjusted or turned on or off according to your specific needs.



# Structural Integrity

Designed for years of off-road service



## Braking Performance

Caterpillar has made hydraulic “wet disc” braking standard on all four corners of the 777G. In addition, parking brake actuation is now included on front wheels as well as back wheels. These new standard features increase the braking performance and slope holding capabilities of the truck.

G Series has increased the number of springs in its brake design. This increases the force available to disengage the brakes ensuring clearances are maintained, reducing wear.

A new brake wear indicator can be found on the rear wheels to help you monitor brake life.

Extending brake life can also be achieved by choosing the optional Cat Engine Brake. This Caterpillar design works in conjunction with the automatic retarder control (ARC) to slow the machine.



## Rear Wheel Steel Spindles

G Series wheel spindles are solid steel and interchangeable from one side to the other extending their useful service life.

## Inverted Rear Cylinders

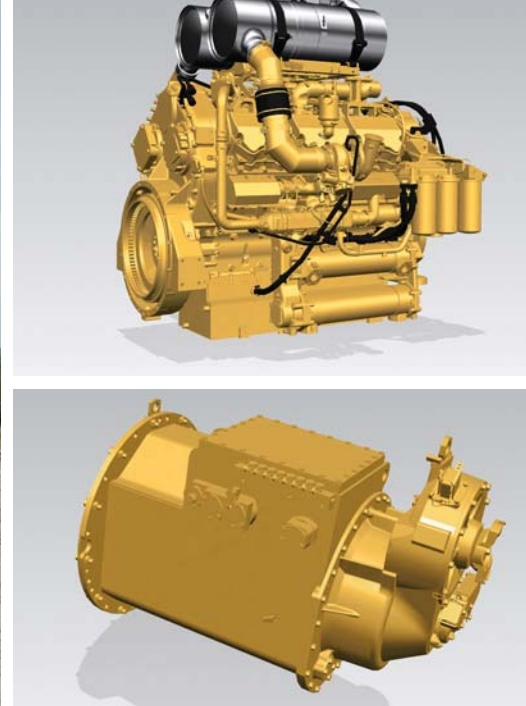
For G Series, Caterpillar has inverted the rear suspension cylinders to better protect the rods, keeping them cleaner for longer durations.

## Structures

The 777G frame has adjustments to the front bumper that improve the approach angle of the truck. Mild steel, box section construction, castings in high stress areas and a high percentage of robotic welding provide long life, ease of welding in the field and reliable performance.

To support the additional torque being produced by the 777G power train, Caterpillar has updated the design of the rear axle housing making it larger with a built-in site gauge to facilitate daily maintenance checks. Customers can choose optional rear axle filtration and forced lubrication for long-life durability in challenging applications.





# Power Train

Application specific designs for industry leading performance

## Engine

The 777G is powered by the updated Cat C32 ACERT diesel engine.

- For the 777G, the engine and torque converter are producing 7% more usable torque giving the truck new performance levels and quick haul cycles.
- Cat MEUI™ injectors provide high pressure, fine atomization for fuel efficient response to loads.
- Low pressure fuel lines from the tank to the engine simplify service.
- The C32 is carefully balanced with vibration controls that reduce noise and protect against unnecessary harmonics.
- Cooling is provided by either a demand fan (standard for Tier 4 Final machines) or a conventional cooling fan.
- Ground level kill switch for safety.
- Excellent high-altitude capability.

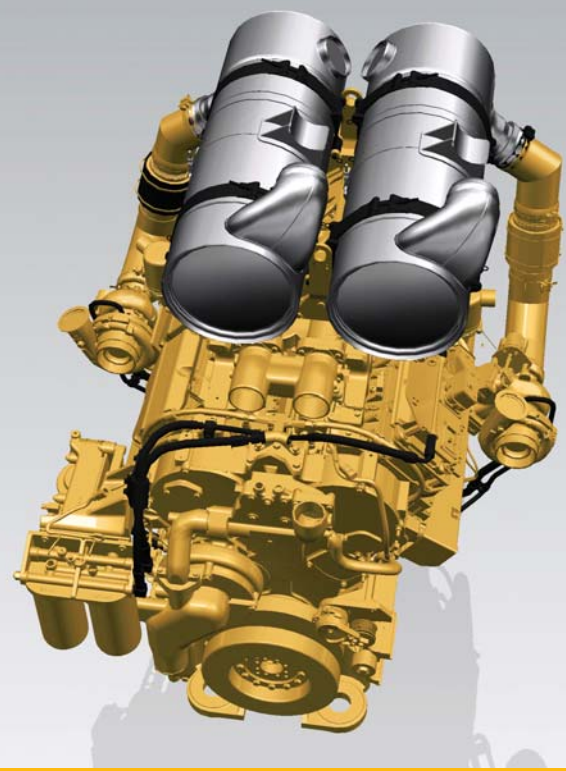
## Planetary Powershift Transmission

With new control strategies, this proven transmission is better than ever.

- New software controls called APECS provide protection with enhanced electronic clutch pressure control.
- APECS also includes Torque Shift Management that provides quick, responsive travel through the gears and improved performance on grades.
- In addition, Part Throttle Shifting provides an automotive-quality ride.

## Special Package Options

- A mud guard package includes engine enclosures to help prevent excessive material build up.
- Caterpillar offers an “XQ,” or extra quiet, package offering additional sound suppression.



# Emission Controls

Reduced emissions using simple to use, reliable solutions

## **Tier 4 Final Emission Controls**

Caterpillar offers a simple and robust U.S. EPA Tier 4 Final passive solution. Other than normal maintenance, this system requires no additional input or intervention by the operator.

### **NO<sub>x</sub> Reduction**

Supported by cleaner burning, ultra-low sulfur diesel fuel and low ash oils, Caterpillar uses its engine-mounted NO<sub>x</sub> Reduction System (NRS) to cool combustion chamber temperatures and control NO<sub>x</sub> production.

### **Particulate Matter Reduction**

Located on top of the engine are two diesel oxidation catalysts (DOC canisters), one for each exhaust outlet. These DOC canisters reduce particulate emissions.

Tier 4 Final C32 ACERT engines are equipped with MEUI-C injectors. These injectors offer exceptional fuel atomization for engines running at slower speeds. MEUI-C injectors have an improved fuel shut off response time, saving fuel and reducing emissions.

Note that Tier 4 Final equipped machines require the use of ultra-low sulfur diesel fuel and CJ-4 low ash engine oil.

For customers purchasing trucks outside of the U.S. or Canada, Caterpillar offers emission controls similar to those used for Tier 2 regulations.



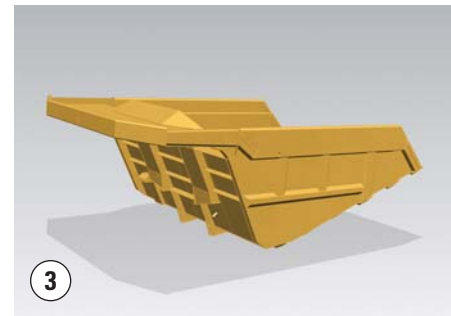
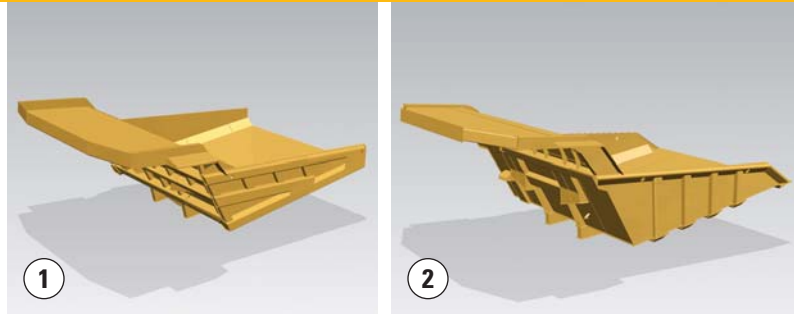
# G Series Body Strategy

Bodies to meet your application and material needs

Because no job site or material is identical, Caterpillar offers its customers several body options. Whether you run on steep grades, off load to a crusher, or haul lightweight material, Caterpillar can accommodate with dual slope, flat floor and coal bodies designed for lightweight materials. In addition, steel and rubber liner options provide additional protection.

## Caterpillar's 10/10/20 Policy

Caterpillar's 10/10/20 Payload Guidelines are in place to help you maximize component life and the availability of your truck. Your Cat dealer can further explain the 10/10/20 policy. For optimum body life, Caterpillar recommends that 110% payloads occur no more than 10% of the time and that the average of all loads equal the nominal payload. Payloads in excess of 120% of nominal exceed the truck's design parameters.



1) Dual Slope Body 2) X Body 3) Coal Body



# Machine Information and Monitoring

Lowering your cost per ton with vital fleet information



Your G Series truck has the ability to communicate (and receive) valuable information. Information that can lead you to producing at a lower cost per ton.

## Instrument Cluster

The instrument cluster is used by the operator for quick and simple machine information at a glance. This display also warns the operator with solid lights (Category 1 Warnings) or flashing lights (Category 2 or 3 Warnings) as well as an audible alarm when an event is occurring.

## Cat Advisor Display

The Advisor Display has five menus:

1. **Operator:** allows 10 people to set up individual profiles and preferences.
2. **Monitor:** displays four parameters per screen including  
**Payload** – there are three sections, Payload State; Payload and Target.  
**Payload State** – will display “Loading”; “Last Pass” or “Loaded.”  
**Payload** – displays the calculated payload weight, weight is taken twice to confirm.  
**Target** – displays the target payload.
3. **Service:** diagnostics including events, data logger, parameters, calibrations and more.
4. **Settings:** set specific targets for autolube intervals, speed limit and more.
5. **Service Mode:** a portal to password protected parameters.

## VIMS™

Vital Information Management System (VIMS™) is the hardware and software behind the machine information and payload tracking that comes through the Advisor display on your 777G truck. VIMS is standard and comes with the Truck Production Management System and Ton Kilometer Per Hour (TKPH) feature to provide production reporting as well as real time load information to the loader operator. TKPH provides valuable tire health information and can be set up to slow the truck when calculated tire limits are being reached.

### Truck Production Management System (TPMS)

TPMS – Cat Truck Production Management System will help you get the best return on your truck investment by making sure you're hauling appropriate payloads with every cycle.

- Indicator side lights show the loader operator when they are on their last pass and when the truck is fully loaded.
- TPMS stores 2,400 payload cycles; reports on weights, haul cycle times, distances, with date and time stamps.

### Ton Kilometer per Hour (TKPH), Ton Mile per Hour (TMPH) Tire Monitoring

This program takes the payload value from TPMS, combines it with ambient air temperature, machine speed and the manufacturer's TKPH (TMPH) rating for your tires and calculates tire condition continuously. As a tire approaches its calculated limits, the operator gets a warning inside the cab. This Caterpillar exclusive feature is an important tool in your efforts to extend tire life.

### Cat Product Link

Cat Product Link allows remote monitoring of equipment to improve overall fleet-management effectiveness. Product Link is deeply integrated into machine systems. Events and diagnostic codes, as well as hours, fuel, idle time and other detailed information are transmitted to a secure web based application, VisionLink™. VisionLink includes powerful tools to convey information to users and dealers, including mapping, working and idle time, fuel level and more.

*\* Product Link licensing not available in all areas. Please consult your Cat dealer for availability.*



# Cat MineStar System

Efficiently manage your fleet, machine health and enhance safety



Cat MineStar™ System is the industry's broadest suite of integrated mine operations and mobile equipment management technologies, configurable to suit your operation's needs. Its capability sets – Fleet, Terrain, Detect, Health and Command – contain a range of technologies that let you manage everything from fleet assignment and condition monitoring to remote and autonomous control. The 777G can be equipped with many of these advanced technologies.

## Fleet

Fleet makes it easy to keep your operation running safely and at peak performance, with real-time control. This optional system consists of on-machine and office technologies, enabling your operations to easily drill down for detailed views and analysis, determine the impact of operational changes prior to implementing them, and analyze reporting on selectable groups of assets down to individual machines.

Fleet can work with data from all types of assets and equipment – including off-highway trucks, wheel loaders, motor graders, wheel dozers, shovels, light duty vehicles and equipment from other manufacturers – helping you reduce costs per ton, enhance productivity and boost overall site profitability.

## Detect

Object Detection, one of the capabilities of Detect, comes standard on the 777G. Using a combination of radars, an in-cab display, and multiple cameras, Object Detection provides equipment operators with enhanced awareness for increased site safety. At startup, slow speed operation or whenever a machine stops for a set period of time, the touch screen display alerts the operator when objects have entered critical areas around the equipment. Radars communicate with the in-cab display to provide a visual indication of where objects are relative to the machine along with proximity bars to inform the operator of distance to the detected object. The system can be configured for distance or speed-based standby mode. Both visual and audible warnings are provided when an object has been detected while the machine is in gear and attempts to move towards the object. An optional radar wash feature keeps debris off the cameras and radars, enabling your system to run effectively all shift long.

## Health

By identifying many types of potential equipment problems before failure, Health works to minimize unscheduled downtime and productivity loss. Plus, it helps keep your 777G operating costs in check by streamlining service and maintenance management and scheduling. This optional system includes comprehensive maintenance and service planning capabilities. It enables managers to track what equipment is due for service, schedule repairs and maintenance, see what procedures have been performed and monitor how the machine is performing once it goes back to work.

Health can also help identify issues beyond the equipment, including problem areas within the mine site itself. With GNSS tracking capabilities, it generates reports showing where health and operational alerts occur. That can help you spot site problems – such as suboptimal haul road conditions – that affect machine health, machine availability and asset life.

For more information on Cat MineStar System capabilities visit [mining.cat.com/miningtechnology](http://mining.cat.com/miningtechnology).



# Serviceability

Clean, convenient, time-saving solutions



G Series will introduce time-saving service improvements to help reduce your costs associated with maintaining your fleet.

## Fluid Fill Service Center

A new optional fluid fill service center is located on the left front side of the machine. Technicians can check the level of all machine fluids including:

- Transmission/torque converter hydraulic oil
- Hoist/Brake hydraulic oil
- Diesel fuel
- Engine oil
- Engine coolant

A lighted keypad will indicate three green lights if the fluid level is full, two green lights if the fluid level is at normal levels, and one light if fluid should be added.

## Cab Fluid Level Monitoring

Operators are notified when a fluid level is approaching its low level threshold, allowing them to take action in a timely manner.

## Electrical Service Center

An Electrical Service Center is also at ground level located on the right front bumper of the machine.

This service center offers connections to:

1. Master Disconnect Switch
2. Auxiliary Start Receptacle
3. Light
4. VIMS Port
5. ET Port
6. Hydraulics Lockout
7. Engine Lockout
8. Breaker – Engine Control
9. Breaker – Alternator
10. Breaker – Main Electrical

### **Brake Wear Indicator**

G Series trucks will come equipped from the factory with a simple, time-saving brake wear indicator on the left rear wheel that provides technicians with a visible indicator for rear brake wear levels.

### **Filters**

Due to improved hydraulic system updates which have made the system more efficient, Caterpillar is able to extend hydraulic filter life to 1,000 hours under normal operating conditions. All engine filters are conveniently grouped and easily accessible.

### **Fuel**

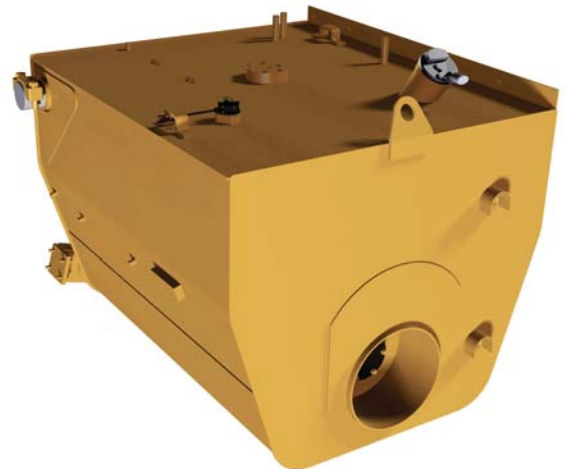
The 777G fuel tank comes in two sizes: 1136 L/300 gal and 1325 L/350 gal. It features fast fill at the tank with the port recessed to avoid damage. New sight gauges indicate 1/4 and 3/4 fill levels. A capacitive fuel level indicator provides real time fuel level information.

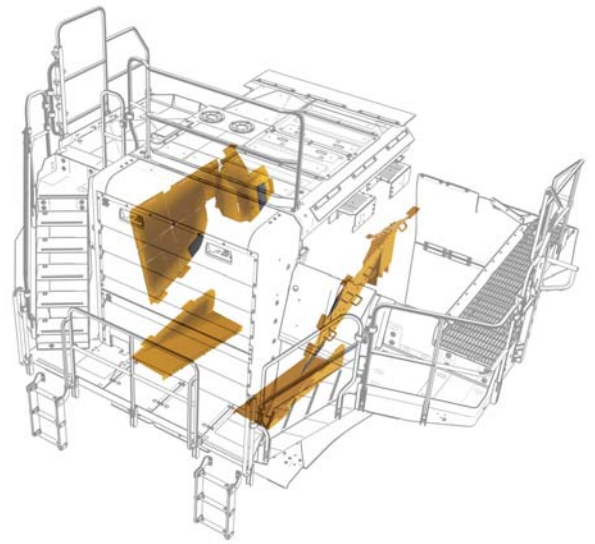
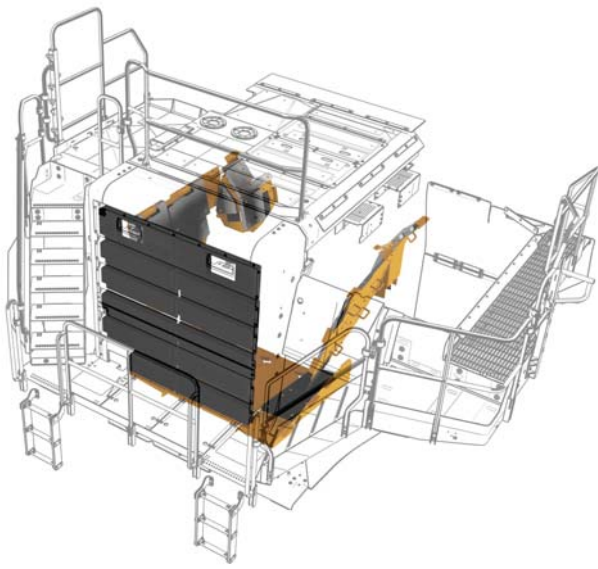
### **Cab Air Filter Precleaner**

An optional precleaner is available for cab air filters. This option can significantly extend your filter life and service intervals.

### **Right Side Platform**

The right side platform on the 777G has been designed specifically to handle customer attachments that may include mandatory fire suppression hardware.





# Special Packages

Options to meet your needs

## **XQ Sound Suppression Package**

For environments sensitive to sound, the XQ package reduces the spectator noise level of the machine to 112 dB(A) using both the ISO 6393 and ISO 6395 test procedures. This test result has an accuracy of plus or minus 1 dB(A). This package includes a noise reduced Cat C32 engine, panels that enclose the engine compartment and sound reduction material within the radiator cowl. Sound reduction material in the cab is standard on the truck. Tier 2 trucks shipping outside of the U.S. and Canada will come equipped with a demand fan for the XQ package.

## **Mud Package**

Caterpillar offers a mud package that encloses the engine compartment and helps protect against sticky, difficult material that could affect machine performance or maintenance. Black rubber mud flaps are standard equipment on the machine.



# Safety

For the continued success of your people and business

Cat trucks offer operators a comfortable, confident ride with safety features that help them stay informed, alert and in control.

## Safety

- Ground level daily check points
- Excellent visibility using mirrors and Object Detection with its in cab display
- Solid, stable walking/working platforms with good traction, material shedding, handrails
- Emergency egress from within the cab through a hinged right-side window
- Ground level electrical service box for lockout/tag out, steering system lockout
- Ground level optional fluid fill center with level check keypad
- Secondary steering, engages automatically
- Three levels of braking (service, secondary, engine) and a red foot pedal for secondary brakes
- ROPS/FOPS structures in cab
- Brake wear indicator
- Three point harness operator seat belt
- Trainer seat with lap belt
- Body up gear limiting
- Haul road speed limiting
- Automatic Retarder Control, smooth predictable performance
- New Traction Control System, returns the truck to solid footing sooner
- In cab fluid level monitoring for operator
- TKPH/TMPH – Tire Monitoring System
- Truck Production Monitoring System (TPMS) providing payload, fuel, segment and cycle time information
- Engine overspeed protection using ARC
- Three levels of warning for parameters outside of their working zones
- Ground level fuel shut off switch to stop the engine





# Sustainability

Sustainability benefits us all

At Caterpillar, sustainable designs have always been a priority. Cat trucks have historically offered industry leading availability, life cycles and parts commonality. Today we offer even more ways to reduce our impact on the environment.

With G Series, Caterpillar is pleased to be releasing its first North American Tier 4 Final product – two years prior to the implementation of the regulation. In addition to reducing emissions, G Series offers lower operator sound levels and new ways to conserve fuel.

- Fuel conservation features: two fuel economy modes, speed limiting, Auto Neutral Idle, Engine Idle Shutdown, new Traction Control System
- Keeping the site clean with grouped service locations, ecology drains and convenient, optional fluid fill and electrical service centers
- Reducing operator cab noise levels by 50% from previous trucks
- Longer component life for tires using TCS and TKPH/TMPH
- Cat Reman parts offer recycling and reuse opportunities
- Longer service life for hydraulic oil filters (1,000 hrs), and air filters with precleaner installed
- Reduced emissions with Tier 4 Final emission controls (for North America) reducing  $\text{No}_x$  and Particulate Matter by 90% over Tier 3 as well as reduced emissions from fuel conservation
- Parts commonality with other Cat equipment

# 777G Off-Highway Truck Specifications

## Engine (Tier 4 Final)

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|--------------------------|-----------------|-----------------------|
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| Engine Speed             | 1,800 rpm       |                       |
| Gross Power – SAE J1995  | 765 kW          | 1,025 hp              |
| Net Power – SAE J1349    | 683 kW          | 916 hp                |
| Net Power – ISO 9249     | 683 kW          | 916 hp                |
| Net Power – 80/1269/EEC  | 683 kW          | 916 hp                |
| Engine Power – ISO 14396 | 752 kW          | 1,008 hp              |
| Peak Torque Speed        | 1,300 rpm       |                       |
| Net Torque               | 5044 N·m        | 3,720 lb-ft           |
| Cylinders                | 12              |                       |
| Bore                     | 145 mm          | 5.7 in                |
| Stroke                   | 162 mm          | 6.4 in                |
| Displacement             | 32.1 L          | 1,959 in <sup>3</sup> |

## Engine (Tier 2 Equivalent)

|                          |                 |                       |
|--------------------------|-----------------|-----------------------|
| Engine Model             | Cat® C32 ACERT™ |                       |
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| Gross Power – SAE J1995  | 765 kW          | 1,025 hp              |
| Net Power – SAE J1349    | 704 kW          | 945 hp                |
| Net Power – ISO 9249     | 704 kW          | 945 hp                |
| Net Power – 80/1269/EEC  | 704 kW          | 945 hp                |
| Engine Power – ISO 14396 | 755 kW          | 1,012 hp              |
| Peak Torque Speed        | 1,300 rpm       |                       |
| Net Torque               | 5286 N·m        | 3,899 lb-ft           |
| Cylinders                | 12              |                       |
| Bore                     | 146 mm          | 5.7 in                |
| Stroke                   | 162 mm          | 6.4 in                |
| Displacement             | 32.1 L          | 1,959 in <sup>3</sup> |

- Power rating applies at 1,800 rpm when tested under the specified condition 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).
- No engine derating required up to 2286 m (7,500 ft) for Tier 4 Final and 4600 m (15,000 ft) for Tier 2 Equivalent.
- Not regulated under EU Stage IV regulations due to power rating above 560 kW (750 hp).

## Transmission (Tier 4 Final)

|           |           |          |
|-----------|-----------|----------|
| Forward 1 | 10.7 km/h | 6.6 mph  |
| Forward 2 | 14.6 km/h | 9.1 mph  |
| Forward 3 | 19.2 km/h | 11.9 mph |
| Forward 4 | 26.7 km/h | 16.6 mph |
| Forward 5 | 36.2 km/h | 22.5 mph |
| Forward 6 | 48.6 km/h | 30.2 mph |
| Forward 7 | 65.9 km/h | 40.9 mph |
| Reverse   | 12.1 km/h | 7.5 mph  |

## Transmission (Tier 2 Equivalent)

|           |           |          |
|-----------|-----------|----------|
| Forward 1 | 10.7 km/h | 6.6 mph  |
| Forward 2 | 14.6 km/h | 9.1 mph  |
| Forward 3 | 19.2 km/h | 11.9 mph |
| Forward 4 | 26.7 km/h | 16.6 mph |
| Forward 5 | 36.2 km/h | 22.5 mph |
| Forward 6 | 48.6 km/h | 30.2 mph |
| Forward 7 | 65.9 km/h | 40.9 mph |
| Reverse   | 12.1 km/h | 7.5 mph  |

- Maximum travel speeds with standard 27.00R49 (E4) tires.

## Final Drives

|                       |         |
|-----------------------|---------|
| Differential Ratio    | 3.64:1  |
| Planetary Ratio       | 4.80:1  |
| Total Reduction Ratio | 17.49:1 |

## Brakes

|                            |                         |                        |
|----------------------------|-------------------------|------------------------|
| Brake Surface Area – Front | 40 846 cm <sup>2</sup>  | 6,331 in <sup>2</sup>  |
| Brake Surface Area – Rear  | 102 116 cm <sup>2</sup> | 15,828 in <sup>2</sup> |
| Brake Standards            | ISO 3450:1996           |                        |

## Body Hoists (Tier 4 Final)

|                              |            |               |
|------------------------------|------------|---------------|
| Pump Flow – High Idle        | 458 L/min  | 120.9 gal/min |
| Relief Valve Setting – Raise | 18 950 kPa | 2,750 psi     |
| Relief Valve Setting – Lower | 3450 kPa   | 500 psi       |
| Body Raise Time – High Idle  | 15 seconds |               |
| Body Lower Time – Float      | 13 seconds |               |
| Body Lower Time – High Idle  | 13 seconds |               |

## Body Hoists (Tier 2 Equivalent)

|                              |            |               |
|------------------------------|------------|---------------|
| Pump Flow – High Idle        | 458 L/min  | 120.9 gal/min |
| Relief Valve Setting – Raise | 18 950 kPa | 2,750 psi     |
| Relief Valve Setting – Lower | 3450 kPa   | 500 psi       |
| Body Raise Time – High Idle  | 15 seconds |               |
| Body Lower Time – Float      | 13 seconds |               |
| Body Lower Time – High Idle  | 13 seconds |               |

## Capacity – Dual Slope – 100% Fill Factor

|                  |                     |                      |
|------------------|---------------------|----------------------|
| Struck           | 41.9 m <sup>3</sup> | 54.8 yd <sup>3</sup> |
| Heaped 2:1 (SAE) | 60.2 m <sup>3</sup> | 78.8 yd <sup>3</sup> |

## Capacity – X Body – 100% Fill Factor

|                  |                     |                      |
|------------------|---------------------|----------------------|
| Struck           | 43.1 m <sup>3</sup> | 56.3 yd <sup>3</sup> |
| Heaped 2:1 (SAE) | 64.1 m <sup>3</sup> | 83.8 yd <sup>3</sup> |

## Capacity – Coal Bodies – 100% Fill Factor

|  |                    |                     |
|--|--------------------|---------------------|
| SAE 2:1 for use with material densities of 1160 kg/m <sup>3</sup> (1,950 lb/yd <sup>3</sup> )            | 89 m <sup>3</sup>  | 116 yd <sup>3</sup> |
| SAE 2:1 for use with material densities of 1040-1160 kg/m <sup>3</sup> (1,750-1,950 lb/yd <sup>3</sup> ) | 106 m <sup>3</sup> | 139 yd <sup>3</sup> |
| SAE 2:1 for use with material densities of 950-1040 kg/m <sup>3</sup> (1,600-1,750 lb/yd <sup>3</sup> )  | 110 m <sup>3</sup> | 144 yd <sup>3</sup> |
| SAE 2:1 for use with material densities less than 950 kg/m <sup>3</sup> (1,600 lb/yd <sup>3</sup> )      | 126 m <sup>3</sup> | 165 yd <sup>3</sup> |

# 777G Off-Highway Truck Specifications

## Weight Distributions – Approximate

|                     |     |
|---------------------|-----|
| Front Axle – Empty  | 46% |
| Front Axle – Loaded | 33% |
| Rear Axle – Empty   | 54% |
| Rear Axle – Loaded  | 67% |

## Suspension

|                                       |         |        |
|---------------------------------------|---------|--------|
| Empty Loaded<br>Cylinder Stroke Front | 74.7 mm | 2.9 in |
| Empty Loaded<br>Cylinder Stroke Rear  | 66 mm   | 2.5 in |
| Rear Axle Oscillation                 | 5.4°    |        |

## Sound

### Sound Standards

- The operator Equivalent Sound Pressure Level (Leq) is 73 dB(A) when SAE J1166 FEB2008 is used to measure the value for an enclosed cab. This is a work cycle sound exposure level. The cab was properly installed and maintained. The test was conducted with the cab doors and the cab windows closed.
- The exterior sound pressure level for the standard machine measured at a distance of 15 m (49 ft) according to the test procedures specified in SAE J88:2008, mid-gear moving operation is 83 dB(A) for Tier 4 Final trucks and 84 dB(A) for Tier 2 Equivalent.
- Hearing protection may be needed when operating with an open operator station and cab (when not properly maintained or doors/windows open) for extended periods or in a noisy environment.

## Service Refill Capacities

|                                       |         |          |
|---------------------------------------|---------|----------|
| Fuel Tank                             | 1136 L  | 300 gal  |
| Fuel Tank                             | 1325 L  | 350 gal  |
| Cooling System – Tier 4 Final         | 240 L   | 63.4 gal |
| Cooling System – Tier 2 Equivalent    | 228 L   | 60.2 gal |
| Crankcase                             | 109 L   | 28.7 gal |
| Differentials                         | 227 L   | 59.9 gal |
| Final Drives (each)                   | 76 L    | 20 gal   |
| Steering System (includes tank)       | 53.6 L  | 14.1 gal |
| Brake Hoist System (includes tank)    | 444 L   | 117 gal  |
| Brake Hoist System                    | 322 L   | 85 gal   |
| Torque Converter/ Transmission System | 138.5 L | 36.5 gal |

## Steering

|                                   |                                  |       |
|-----------------------------------|----------------------------------|-------|
| Steering Standards                | SAE J1511 FEB94<br>ISO 5010:1992 |       |
| Steer Angle                       | 30.5°                            |       |
| Turning Diameter – Front          | 25.3 m                           | 83 ft |
| Turning Circle Clearance Diameter | 28.4 m                           | 93 ft |

## Tires

- Standard Tire 27.00R49 (E4)
- Productive capabilities of the 777G truck are such that, under certain job conditions, TKPH (TMPH) capabilities of standard or optional tires could be exceeded and, therefore, limit production.
  - Caterpillar recommends the customer evaluate all job conditions and consult the tire manufacturer for proper tire selection.

## ROPS

### ROPS/FOPS Standards

- ROPS (Rollover Protective Structure) for cab offered by Caterpillar meets ISO 3471:2008 ROPS criteria.
- FOPS (Falling Objects Protective Structure) meets ISO 3449:2005 Level II FOPS criteria.

## Weight/Payload Calculation – Tier 4 Final Examples

| <b>777G – X Body (flat floor)</b>     |               | <b>327-0400<br/>Body System</b>                 |                   | <b>363-5111<br/>Body + Steel Liner</b>          |                   | <b>363-5112<br/>Body + HD Steel Liner</b>       |                   | <b>363-5113<br/>Body + Rubber Liner</b>         |                   |
|---------------------------------------|---------------|---|-------------------|---|-------------------|---|-------------------|---|-------------------|
| Base – Floor/Sidewall/Frontwall       | mm<br>in      | <b>20/10/12<br/>(0.79/0.39/0.47)</b>            |                   | <b>20/10/12<br/>(0.79/0.39/0.47)</b>            |                   | <b>20/10/12<br/>(0.79/0.39/0.47)</b>            |                   | <b>20/10/12<br/>(0.79/0.39/0.47)</b>            |                   |
| Liner – Floor/Sidewall/Frontwall      | mm<br>in      | <b>NA</b>                                       |                   | <b>12/10/6<br/>(0.47/0.39/0.24)</b>             |                   | <b>16/10/10<br/>(0.63/0.39/0.39)</b>            |                   | <b>102/10/10<br/>(4.02/0.39/0.39)</b>           |                   |
| Payload Capacity                      |               | <b>64.1 m<sup>3</sup> (83.8 yd<sup>3</sup>)</b> |                   | <b>63.5 m<sup>3</sup> (83.1 yd<sup>3</sup>)</b> |                   | <b>63.3 m<sup>3</sup> (82.8 yd<sup>3</sup>)</b> |                   | <b>60.9 m<sup>3</sup> (79.7 yd<sup>3</sup>)</b> |                   |
| Target Gross Machine Weight           | kg (lb)       | 164 654 (363,000)                               | 164 654 (363,000) | 164 654 (363,000)                               | 164 654 (363,000) | 164 654 (363,000)                               | 164 654 (363,000) | 164 654 (363,000)                               | 164 654 (363,000) |
| Empty Chassis Weight                  | kg (lb)       | 51 286 (113,085)                                | 51 286 (113,085)  | 51 286 (113,085)                                | 51 286 (113,085)  | 51 286 (113,085)                                | 51 286 (113,085)  | 51 286 (113,085)                                | 51 286 (113,085)  |
| Body System Weight                    | kg (lb)       | 15 851 (34,945)                                 | 20 676 (45,583)   | 22 249 (49,501)                                 | 23 042 (50,800)   | 23 042 (50,800)                                 | 23 042 (50,800)   | 23 042 (50,800)                                 | 23 042 (50,800)   |
| Empty Machine Weight                  | kg (lb)       | 67 137 (148,036)                                | 71 850 (158,428)  | 73 535 (162,144)                                | 74 328 (163,892)  | 74 328 (163,892)                                | 74 328 (163,892)  | 74 328 (163,892)                                | 74 328 (163,892)  |
| <b>Attachments</b>                    |               |   |                   |   |                   |   |                   |   |                   |
| Fuel Tank Size                        | L (gal)       | 1136 (300)                                      | 1136 (300)        | 1136 (300)                                      | 1136 (300)        | 1136 (300)                                      | 1136 (300)        | 1136 (300)                                      | 1136 (300)        |
| Fuel Tank – 100% Fill                 | kg (lb)       | 955 (2,106)                                     | 955 (2,106)       | 955 (2,106)                                     | 955 (2,106)       | 955 (2,106)                                     | 955 (2,106)       | 955 (2,106)                                     | 955 (2,106)       |
| Debris Allowance – 2%                 | kg (lb)       | 1362 (3,003)                                    | 1456 (3,211)      | 1490 (3,285)                                    | 1525 (3,319)      | 1525 (3,319)                                    | 1525 (3,319)      | 1525 (3,319)                                    | 1525 (3,319)      |
| Empty Operating Weight**              | kg (lb)       | 68 092 (150,143)                                | 74 011 (160,535)  | 74 490 (164,250)                                | 75 283 (165,999)  | 75 283 (165,999)                                | 75 283 (165,999)  | 75 283 (165,999)                                | 75 283 (165,999)  |
| Target Payload*                       | kg (lb)       | 95 200 (209,854)                                | 90 393 (199,254)  | 88 674 (195,465)                                | 87 865 (193,681)  | 87 865 (193,681)                                | 87 865 (193,681)  | 87 865 (193,681)                                | 87 865 (193,681)  |
| Target Payload*                       | tonnes (tons) | 95.2 (104.9)                                    | 90.4 (99.6)       | 88.7 (97.7)                                     | 87.9 (96.8)       | 87.9 (96.8)                                     | 87.9 (96.8)       | 87.9 (96.8)                                     | 87.9 (96.8)       |
| <b>10/10/20 Policy*</b>               |               |   |                   |   |                   |   |                   |   |                   |
| <b>Nominal Payload – 100%</b>         | kg (lb)       | 95 200 (209,854)                                | 90 393 (199,254)  | 88 674 (195,465)                                | 87 865 (193,681)  | 87 865 (193,681)                                | 87 865 (193,681)  | 87 865 (193,681)                                | 87 865 (193,681)  |
| <b>Maximum Working Payload – 110%</b> | kg (lb)       | 104 720 (230,840)                               | 99 432 (219,180)  | 97 541 (215,011)                                | 96 652 (213,049)  | 96 652 (213,049)                                | 96 652 (213,049)  | 96 652 (213,049)                                | 96 652 (213,049)  |
| <b>Not to Exceed Payload – 120%</b>   | kg (lb)       | 114 240 (251,825)                               | 108 471 (239,105) | 106 409 (234,558)                               | 105 438 (232,417) | 105 438 (232,417)                               | 105 438 (232,417) | 105 438 (232,417)                               | 105 438 (232,417) |
| <b>Maximum Gross Machine Weight*</b>  | kg (lb)       | 182 332 (401,968)                               | 181 276 (399,640) | 180 899 (398,808)                               | 180 721 (398,416) | 180 721 (398,416)                               | 180 721 (398,416) | 180 721 (398,416)                               | 180 721 (398,416) |

| <b>777G – Dual Slope</b>              |               | <b>242-3170<br/>Body System</b>                 |                   | <b>277-3212<br/>Body + Steel Liner</b>          |                   | <b>277-3213<br/>Body + Rubber Liner</b>         |                   |
|---------------------------------------|---------------|---|-------------------|---|-------------------|---|-------------------|
| Base – Floor/Sidewall/Frontwall       | mm<br>in      | <b>20/10/12<br/>(0.79/0.39/0.47)</b>            |                   | <b>20/10/12<br/>(0.79/0.39/0.47)</b>            |                   | <b>20/10/12<br/>(0.79/0.39/0.47)</b>            |                   |
| Liner – Floor/Sidewall/Frontwall      | mm<br>in      | <b>None</b>                                     |                   | <b>16/8/8<br/>(0.63/0.31/0.31)</b>              |                   | <b>102/10/10<br/>(4.02/0.39/0.39)</b>           |                   |
| Payload Capacity                      |               | <b>60.1 m<sup>3</sup> (78.6 yd<sup>3</sup>)</b> |                   | <b>59.5 m<sup>3</sup> (77.8 yd<sup>3</sup>)</b> |                   | <b>57.0 m<sup>3</sup> (74.6 yd<sup>3</sup>)</b> |                   |
| Target Gross Machine Weight           | kg (lb)       | 164 654 (363,000)                               | 164 654 (363,000) | 164 654 (363,000)                               | 164 654 (363,000) | 164 654 (363,000)                               | 164 654 (363,000) |
| Empty Chassis Weight                  | kg (lb)       | 51 286 (113,085)                                | 51 286 (113,085)  | 51 286 (113,085)                                | 51 286 (113,085)  | 51 286 (113,085)                                | 51 286 (113,085)  |
| Body System Weight                    | kg (lb)       | 16 075 (32,954)                                 | 21 770 (48,003)   | 23 017 (50,752)                                 | 23 017 (50,752)   | 23 017 (50,752)                                 | 23 017 (50,752)   |
| Empty Machine Weight                  | kg (lb)       | 67 361 (146,039)                                | 73 056 (161,088)  | 74 303 (163,837)                                | 74 303 (163,837)  | 74 303 (163,837)                                | 74 303 (163,837)  |
| <b>Attachments</b>                    |               |   |                   |   |                   |   |                   |
| Fuel Tank Size                        | L (gal)       | 1136 (300)                                      | 1136 (300)        | 1136 (300)                                      | 1136 (300)        | 1136 (300)                                      | 1136 (300)        |
| Fuel Tank – 100% Fill                 | kg (lb)       | 955 (2,106)                                     | 955 (2,106)       | 955 (2,106)                                     | 955 (2,106)       | 955 (2,106)                                     | 955 (2,106)       |
| Debris Allowance – 2%                 | kg (lb)       | 1344 (2,963)                                    | 1480 (3,264)      | 1505 (3,319)                                    | 1505 (3,319)      | 1505 (3,319)                                    | 1505 (3,319)      |
| Empty Operating Weight**              | kg (lb)       | 68 316 (148,145)                                | 74 011 (163,194)  | 75 258 (165,944)                                | 75 258 (165,944)  | 75 258 (165,944)                                | 75 258 (165,944)  |
| Target Payload*                       | kg (lb)       | 94 994 (211,892)                                | 89 163 (196,542)  | 87 891 (193,737)                                | 87 891 (193,737)  | 87 891 (193,737)                                | 87 891 (193,737)  |
| Target Payload*                       | tonnes (tons) | 95.0 (105.9)                                    | 89.2 (98.3)       | 87.9 (96.9)                                     | 87.9 (96.9)       | 87.9 (96.9)                                     | 87.9 (96.9)       |
| <b>10/10/20 Policy</b>                |               |   |                   |   |                   |   |                   |
| <b>Nominal Payload – 100%</b>         | kg (lb)       | 94 994 (211,892)                                | 89 163 (196,542)  | 87 891 (193,737)                                | 87 891 (193,737)  | 87 891 (193,737)                                | 87 891 (193,737)  |
| <b>Maximum Working Payload – 110%</b> | kg (lb)       | 104 494 (233,081)                               | 98 079 (216,196)  | 96 680 (213,111)                                | 96 680 (213,111)  | 96 680 (213,111)                                | 96 680 (213,111)  |
| <b>Not to Exceed Payload – 120%</b>   | kg (lb)       | 113 993 (254,271)                               | 106 995 (235,850) | 105 469 (232,485)                               | 105 469 (232,485) | 105 469 (232,485)                               | 105 469 (232,485) |
| <b>Maximum Gross Machine Weight*</b>  | kg (lb)       | 182 309 (402,416)                               | 181 006 (399,045) | 180 727 (398,429)                               | 180 727 (398,429) | 180 727 (398,429)                               | 180 727 (398,429) |

\*Refer to Caterpillar 10/10/20 overload policy.

\*\*Includes weight of all attachments.

# 777G Off-Highway Truck Specifications

## Weight/Payload Calculation – Tier 4 Final Examples

| <b>777G – Gateless Coal Body</b>     |               | <b>321-5400<br/>Body System</b>                  |                   | <b>321-5410<br/>Body System</b>                 |                   | <b>321-5500<br/>Body System</b>                 |                   | <b>321-5500<br/>Body System</b>                   |                   |
|--------------------------------------|---------------|--|-------------------|---|-------------------|---|-------------------|---|-------------------|
| Base – Floor/Sidewall/Frontwall      | mm<br>in      | <b>14/10/10<br/>(0.55/0.39/0.39)</b>             |                   | <b>14/10/10<br/>(0.55/0.39/0.39)</b>            |                   | <b>14/10/10<br/>(0.55/0.39/0.39)</b>            |                   | <b>14/10/10<br/>(0.55/0.39/0.39)</b>              |                   |
| Liner – Floor/Sidewall/Frontwall     | mm<br>in      | <b>None</b>                                      |                   | <b>None</b>                                     |                   | <b>None</b>                                     |                   | <b>None</b>                                       |                   |
| Payload Capacity                     |               | <b>89.3 m<sup>3</sup> (116.8 yd<sup>3</sup>)</b> |                   | <b>106 m<sup>3</sup> (138.6 yd<sup>3</sup>)</b> |                   | <b>110 m<sup>3</sup> (143.9 yd<sup>3</sup>)</b> |                   | <b>125.9 m<sup>3</sup> (164.7 yd<sup>3</sup>)</b> |                   |
| Target Gross Machine Weight          | kg (lb)       | 164 654 (363,000)                                | 164 654 (363,000) | 164 654 (363,000)                               | 164 654 (363,000) | 164 654 (363,000)                               | 164 654 (363,000) | 164 654 (363,000)                                 | 164 654 (363,000) |
| Empty Chassis Weight                 | kg (lb)       | 51 286 (113,085)                                 | 51 286 (113,085)  | 51 286 (113,085)                                | 51 286 (113,085)  | 51 286 (113,085)                                | 51 286 (113,085)  | 51 286 (113,085)                                  | 51 286 (113,085)  |
| Body System Weight                   | kg (lb)       | 16 710 (36,839)                                  | 17 826 (39,300)   | 17 826 (39,300)                                 | 17 712 (39,048)   | 17 712 (39,048)                                 | 18 915 (41,700)   | 18 915 (41,700)                                   | 18 915 (41,700)   |
| Empty Machine Weight                 | kg (lb)       | 67 996 (149,924)                                 | 69 112 (152,385)  | 69 112 (152,385)                                | 68 998 (152,133)  | 68 998 (152,133)                                | 70 200 (154,785)  | 70 200 (154,785)                                  | 70 200 (154,785)  |
| <b>Attachments</b>                   |               |  |                   |   |                   |   |                   |   |                   |
| Fuel Tank Size                       | L (gal)       | 1136 (300)                                       | 1136 (300)        | 1136 (300)                                      | 1136 (300)        | 1136 (300)                                      | 1136 (300)        | 1136 (300)  | 1136 (300)        |
| Fuel Tank – 100% Fill                | kg (lb)       | 955 (2,106)                                      | 955 (2,106)       | 955 (2,106)                                     | 955 (2,106)       | 955 (2,106)                                     | 955 (2,106)       | 955 (2,106)                                       | 955 (2,106)       |
| Debris Allowance – 2%                | kg (lb)       | 1379 (3,041)                                     | 1402 (3,090)      | 1402 (3,090)                                    | 1399 (3,085)      | 1399 (3,085)                                    | 1423 (3,138)      | 1423 (3,138)                                      | 1423 (3,138)      |
| Empty Operating Weight**             | kg (lb)       | 68 951 (152,030)                                 | 70 067 (154,491)  | 70 067 (154,491)                                | 69 953 (154,239)  | 69 953 (154,239)                                | 71 156 (156,891)  | 71 156 (156,891)                                  | 71 156 (156,891)  |
| Target Payload*                      | kg (lb)       | 94 324 (207,929)                                 | 93 185 (205,419)  | 93 185 (205,419)                                | 93 302 (205,676)  | 93 302 (205,676)                                | 92 075 (202,971)  | 92 075 (202,971)                                  | 92 075 (202,971)  |
| Target Payload*                      | tonnes (tons) | 94.3 (104.0)                                     | 93.2 (102.7)      | 93.2 (102.7)                                    | 93.3 (102.8)      | 93.3 (102.8)                                    | 92.1 (101.5)      | 92.1 (101.5)                                      | 92.1 (101.5)      |
| <b>10/10/20 Policy</b>               |               |  |                   |   |                   |   |                   |   |                   |
| <b>Target Payload – 100%</b>         | kg (lb)       | 94 324 (207,929)                                 | 93 185 (205,419)  | 93 185 (205,419)                                | 93 302 (205,676)  | 93 302 (205,676)                                | 92 075 (202,971)  | 92 075 (202,971)                                  | 92 075 (202,971)  |
| <b>Target Payload – 110%</b>         | kg (lb)       | 103 756 (228,722)                                | 102 504 (225,961) | 102 504 (225,961)                               | 102 632 (226,244) | 102 632 (226,244)                               | 101 282 (223,268) | 101 282 (223,268)                                 | 101 282 (223,268) |
| <b>Target Payload – 120%</b>         | kg (lb)       | 113 189 (249,515)                                | 111 822 (246,503) | 111 822 (246,503)                               | 111 962 (246,811) | 111 962 (246,811)                               | 110 490 (243,565) | 110 490 (243,565)                                 | 110 490 (243,565) |
| <b>Maximum Gross Machine Weight*</b> | kg (lb)       | 182 140 (401,545)                                | 181 890 (400,994) | 181 890 (400,994)                               | 181 915 (401,050) | 181 915 (401,050)                               | 181 646 (400,456) | 181 646 (400,456)                                 | 181 646 (400,456) |

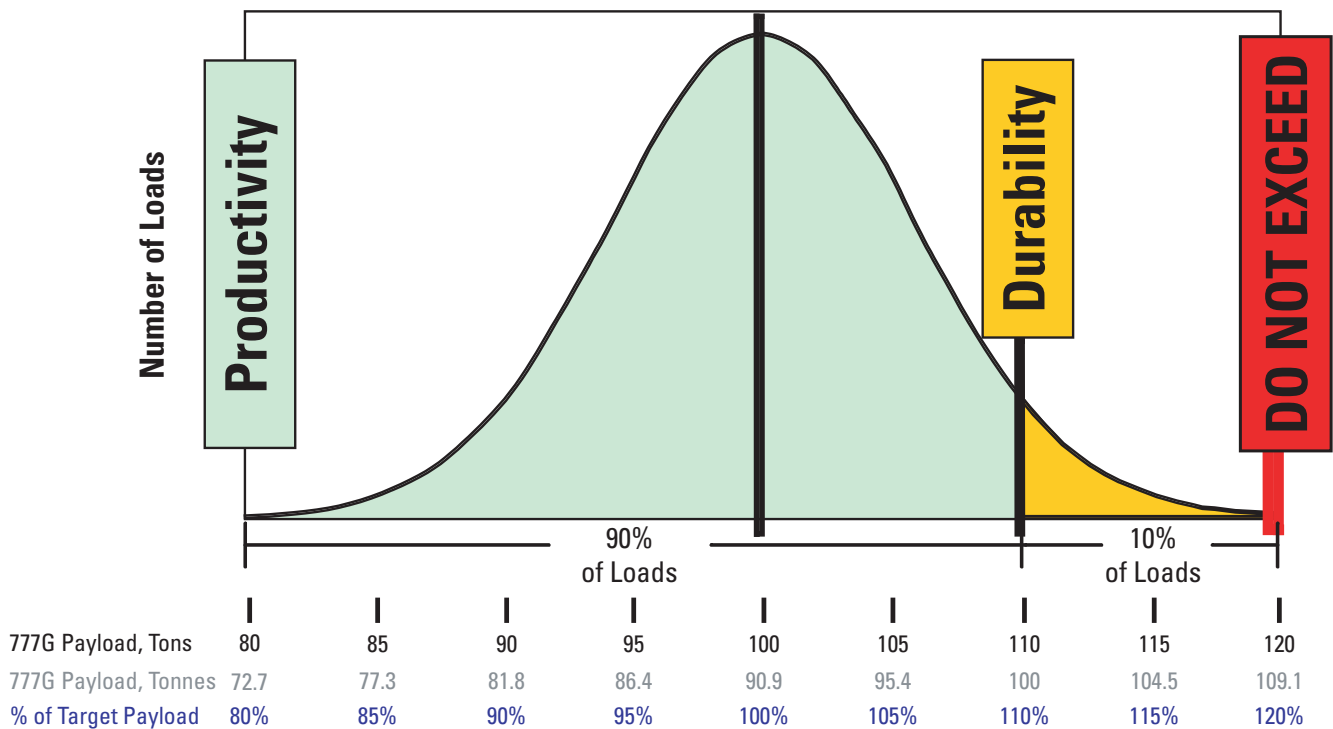
\*Refer to Caterpillar 10/10/20 overload policy.

\*\*Includes weight of all attachments.

## 10/10/20 Payload Management Policy for Optimal Machine Life

The ideal hauling strategy that maximizes machine and machine component life is to *keep the mean of all payloads at or below the machine's rated target payload.*

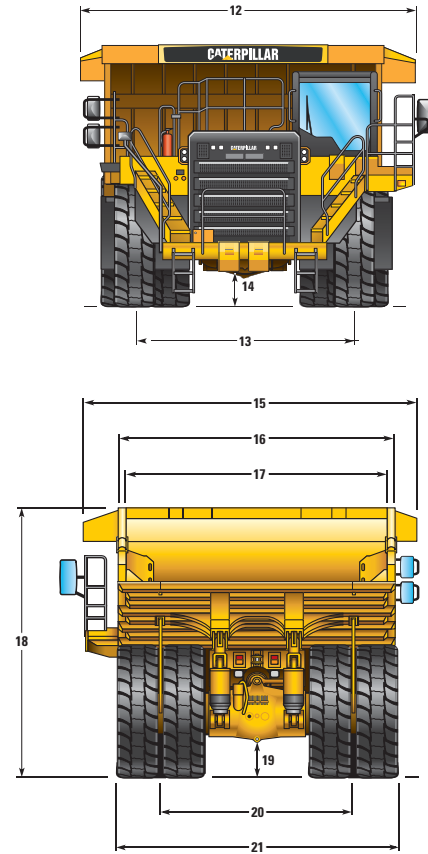
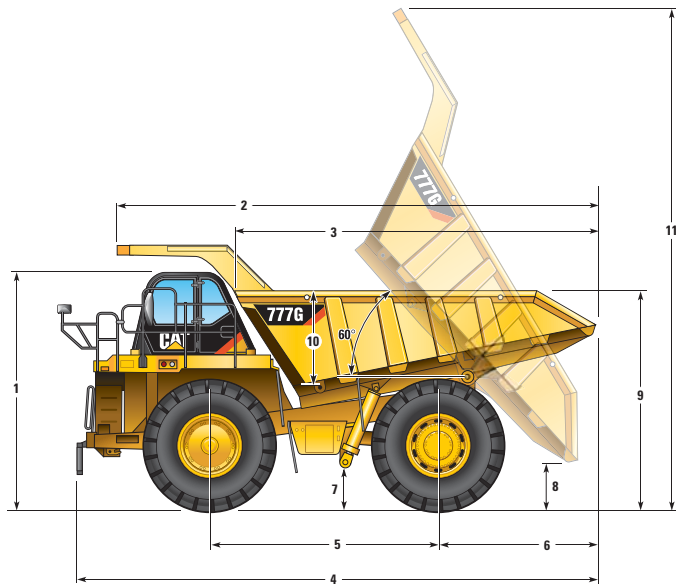
- 90% of loads should fall into this range
- No more than 10% of loads should exceed 10% of the target payload
- No loads should be above 20% of the target payload



# 777G Off-Highway Truck Specifications

## Dimensions

All dimensions are approximate.



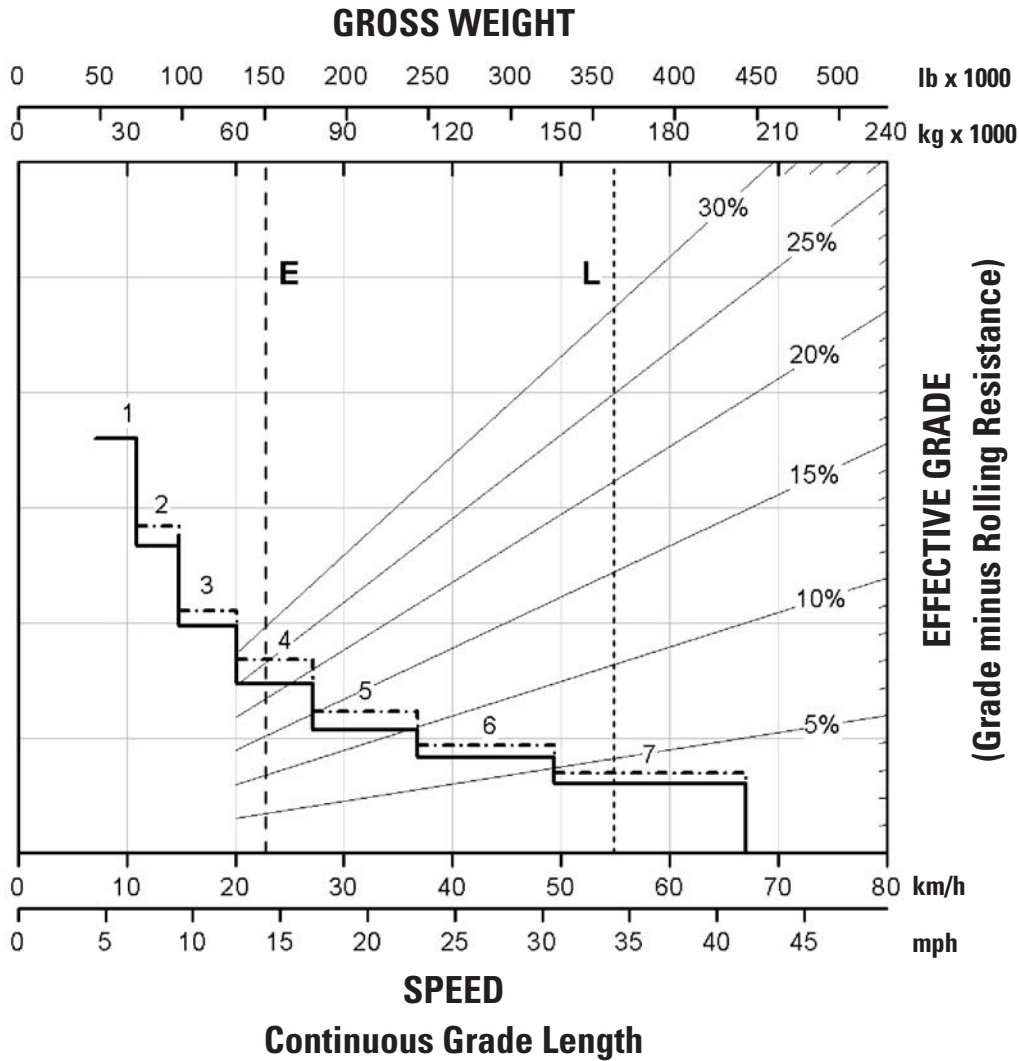
|  | Dual Slope |          | X Body    |          | Coal Body 1 |          | Coal Body 2 |          |
|--|------------|----------|-----------|----------|-------------|----------|-------------|----------|
| <b>1</b> Height to Top of ROPS         | 4730 mm    | 15.50 ft | 4730 mm   | 15.50 ft | 4730 mm     | 15.50 ft | 4730 mm     | 15.50 ft |
| <b>2</b> Overall Body Length           | 9830 mm    | 32.20 ft | 10 070 mm | 33.04 ft | 10 274 mm   | 33.71 ft | 10 445 mm   | 34.27 ft |
| <b>3</b> Inside Body Length            | 6580 mm    | 21.50 ft | 7037 mm   | 23.09 ft | 7562 mm     | 24.81 ft | 7734 mm     | 25.37 ft |
| <b>4</b> Overall Length                | 10 535 mm  | 34.50 ft | 10 758 mm | 35.30 ft | 10 968 mm   | 35.98 ft | 11 140 mm   | 36.55 ft |
| <b>5</b> Wheelbase                     | 4560 mm    | 14.90 ft | 4560 mm   | 14.96 ft | 4560 mm     | 14.96 ft | 4560 mm     | 14.96 ft |
| <b>6</b> Rear Axle to Tail             | 3062 mm    | 10.00 ft | 3263 mm   | 10.71 ft | 3473 mm     | 11.39 ft | 3644 mm     | 11.96 ft |
| <b>7</b> Ground Clearance              | 896 mm     | 2.90 ft  | 896 mm    | 2.94 ft  | 896 mm      | 2.94 ft  | 896 mm      | 2.94 ft  |
| <b>8</b> Dump Clearance                | 965 mm     | 3.10 ft  | 893 mm    | 2.93 ft  | 935 mm      | 3.07 ft  | 821 mm      | 2.69 ft  |
| <b>9</b> Loading Height – Empty        | 4380 mm    | 14.30 ft | 4429 mm   | 14.53 ft | 4851 mm     | 15.92 ft | 5321 mm     | 17.46 ft |
| <b>10</b> Inside Body Depth – Maximum  | 1895 mm    | 6.20 ft  | 1777 mm   | 5.83 ft  | 2223 mm     | 7.29 ft  | 2693 mm     | 8.84 ft  |
| <b>11</b> Overall Height – Body Raised | 9953 mm    | 32.60 ft | 10 071 mm | 33.04 ft | 10 319 mm   | 33.85 ft | 10 319 mm   | 33.85 ft |
| <b>12</b> Operating Width              | 6687 mm    | 21.90 ft | 6687 mm   | 21.94 ft | 6706 mm     | 22.00 ft | 6706 mm     | 22.00 ft |
| <b>13</b> Front Tire Width             | 4170 mm    | 13.60 ft | 4170 mm   | 13.68 ft | 4170 mm     | 13.68 ft | 4170 mm     | 13.68 ft |
| <b>14</b> Engine Guard Clearance       | 864 mm     | 2.80 ft  | 864 mm    | 2.83 ft  | 864 mm      | 2.83 ft  | 864 mm      | 2.83 ft  |
| <b>15</b> Overall Canopy Width         | 6200 mm    | 20.30 ft | 6200 mm   | 20.34 ft | 6404 mm     | 21.01 ft | 6404 mm     | 21.01 ft |
| <b>16</b> Outside Body Width           | 5524 mm    | 18.10 ft | 5682 mm   | 18.64 ft | 6365 mm     | 20.88 ft | 6368 mm     | 20.89 ft |
| <b>17</b> Inside Body Width            | 5200 mm    | 17.00 ft | 5450 mm   | 17.88 ft | 6150 mm     | 20.18 ft | 6150 mm     | 20.18 ft |
| <b>18</b> Front Canopy Height          | 5200 mm    | 17.00 ft | 5370 mm   | 17.62 ft | 5840 mm     | 19.16 ft | 5840 mm     | 19.16 ft |
| <b>19</b> Rear Axle Clearance          | 902 mm     | 2.90 ft  | 902 mm    | 2.96 ft  | 902 mm      | 2.96 ft  | 902 mm      | 2.96 ft  |
| <b>20</b> Rear Dual Tire Width         | 3576 mm    | 11.70 ft | 3576 mm   | 11.73 ft | 3576 mm     | 11.73 ft | 3576 mm     | 11.73 ft |
| <b>21</b> Overall Tire Width           | 5223 mm    | 17.10 ft | 5223 mm   | 17.14 ft | 5223 mm     | 17.14 ft | 5223 mm     | 17.14 ft |



## Retarding Performance (Tier 4 Final)

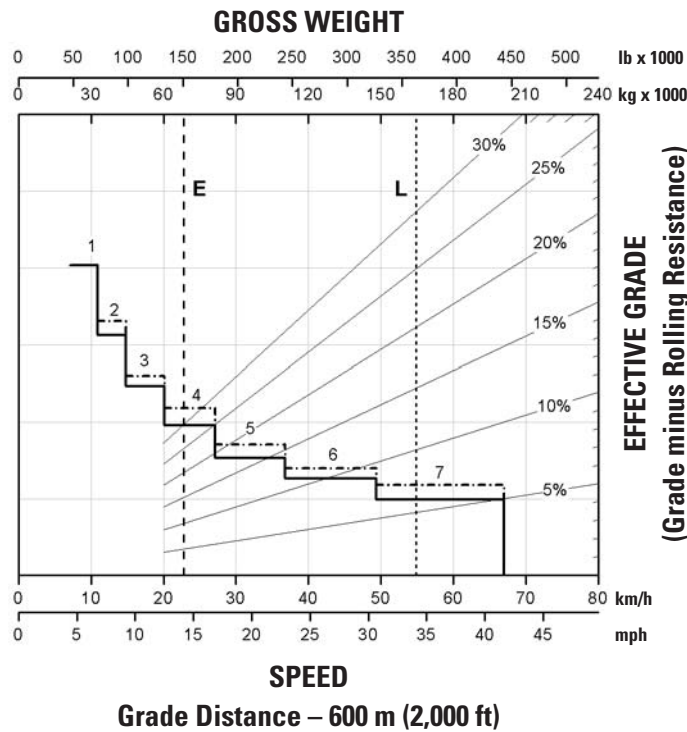
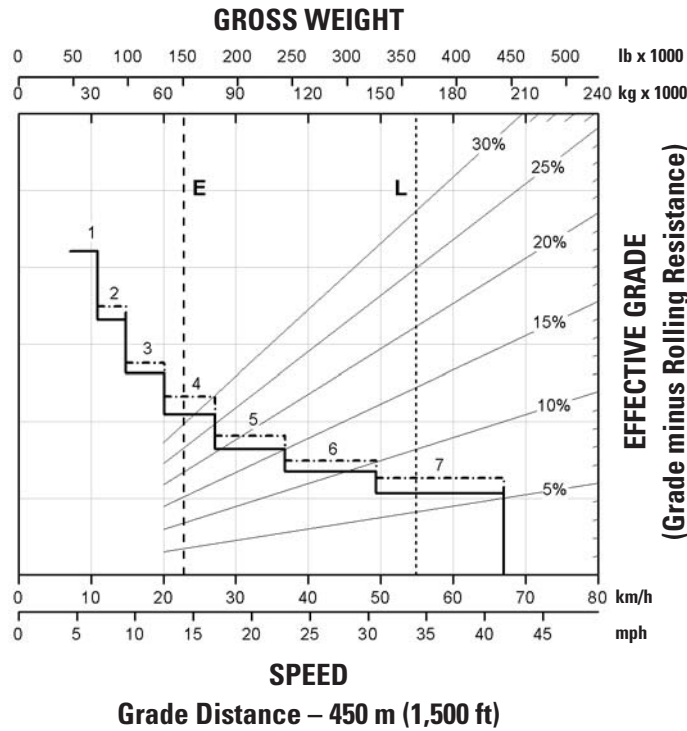
To determine retarding performance: Add lengths of all downhill segments and, using this total, refer to proper retarding chart. Read from gross weight down to the percent effective grade. Effective grade equals actual % grade minus 1% for each 10 kg/t (20 lb/ton) of rolling resistance. From this weight-effective grade point, read horizontally to the curve with the highest obtainable gear, then down to maximum descent speed brakes can properly handle without exceeding cooling capacity. The following charts are based on these conditions: 32° C (90° F) ambient temperature, at sea level, with 27.00R49 (E4) tires.

**NOTE:** Select the proper gear to maintain engine rpm at the highest possible level, without overspeeding the engine. If cooling oil overheats, reduce ground speed to allow transmission to shift to the next lower speed range.

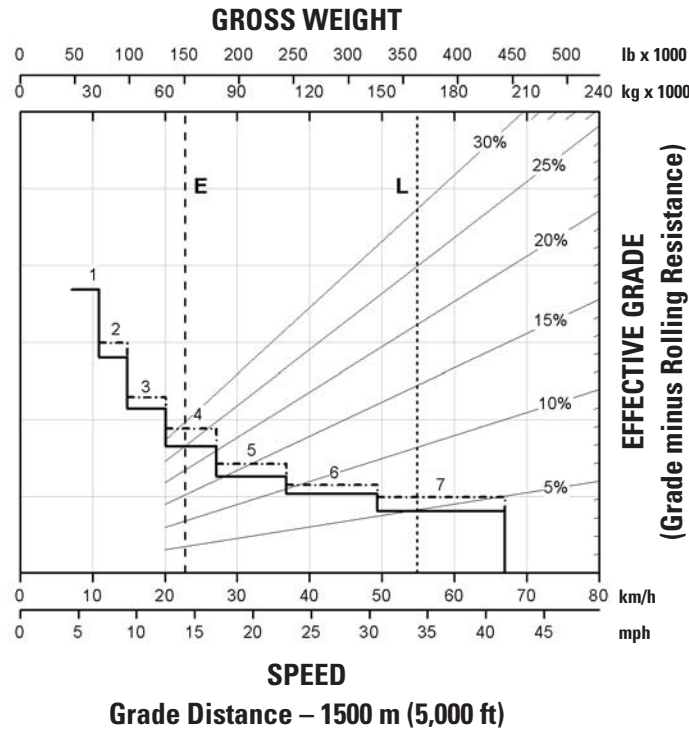
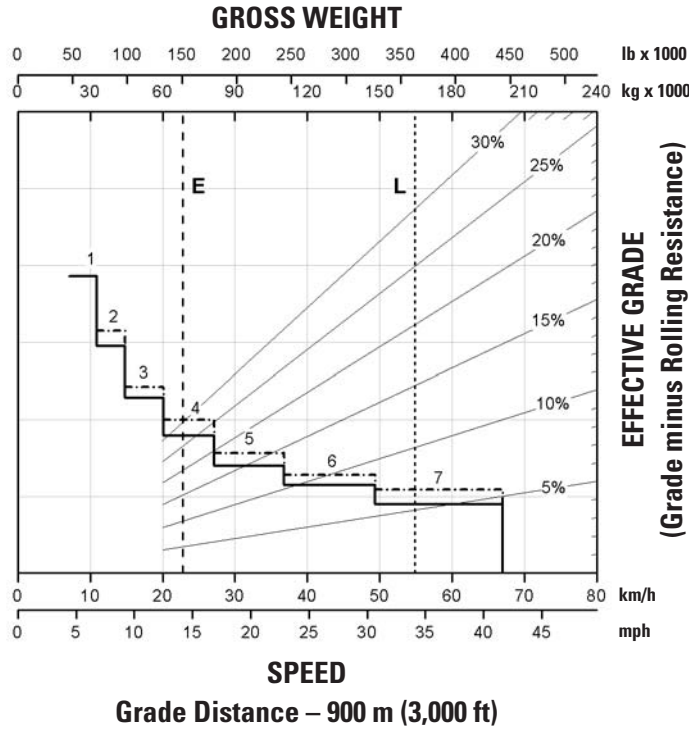


# 777G Off-Highway Truck Specifications

## Retarding Performance (Tier 4 Final)



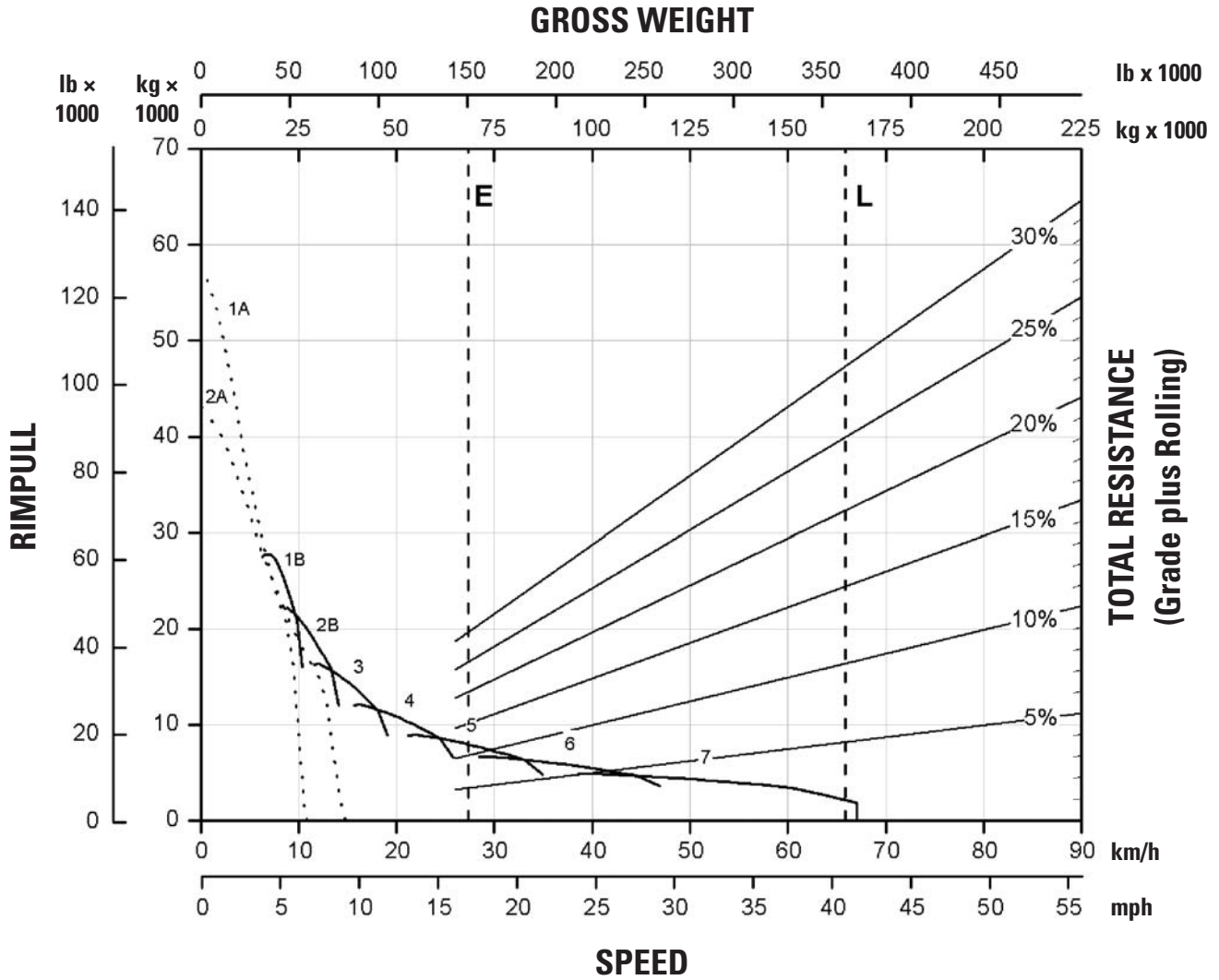
# Retarding Performance (Tier 4 Final)



# 777G Off-Highway Truck Specifications

## Gradeability/Speed/Rimpull (Tier 4 Final)

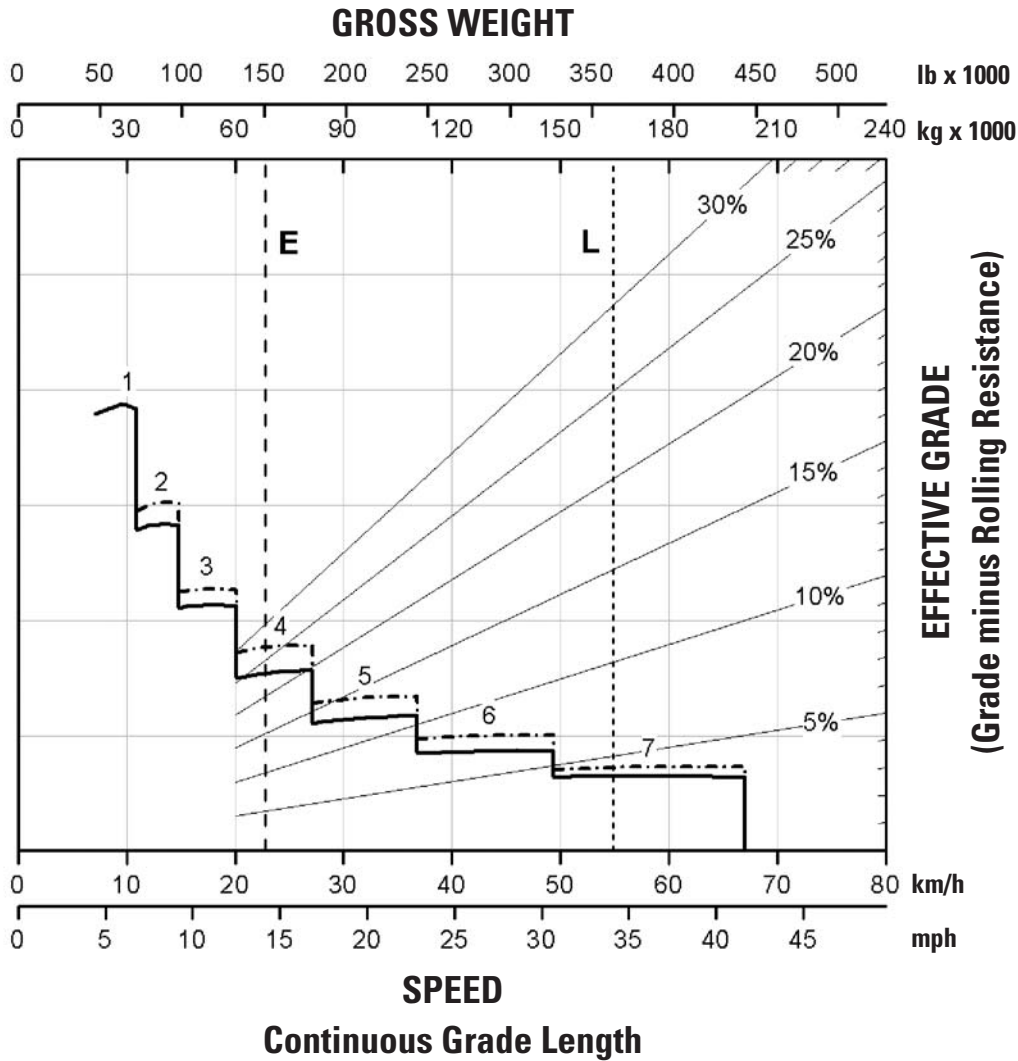
To determine gradeability performance: Read from gross weight down to the percent of total resistance. Total resistance equals actual percent grade plus 1% for each 10 kg/t (20 lb/ton) of rolling resistance. From this weight-resistance point, read horizontally to the curve with the highest obtainable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



## Retarding Performance (Tier 2 Equivalent)

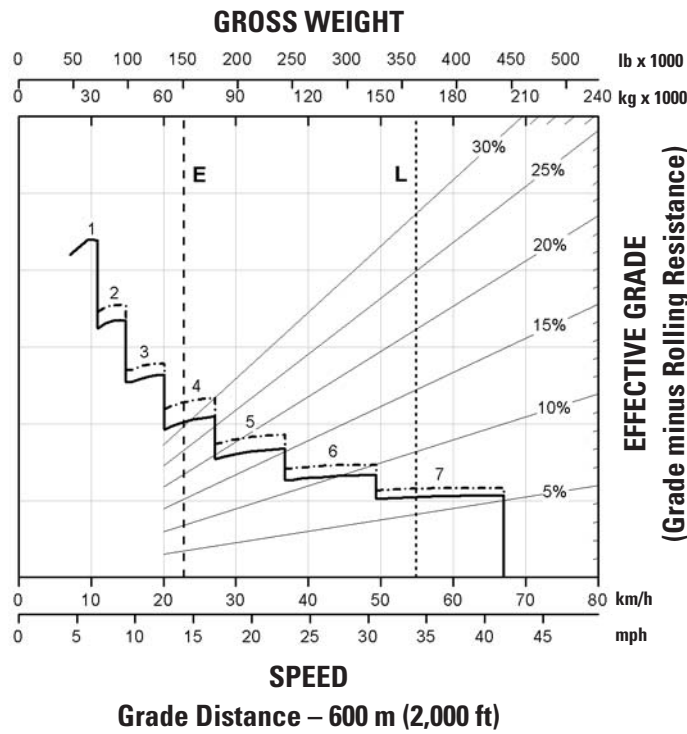
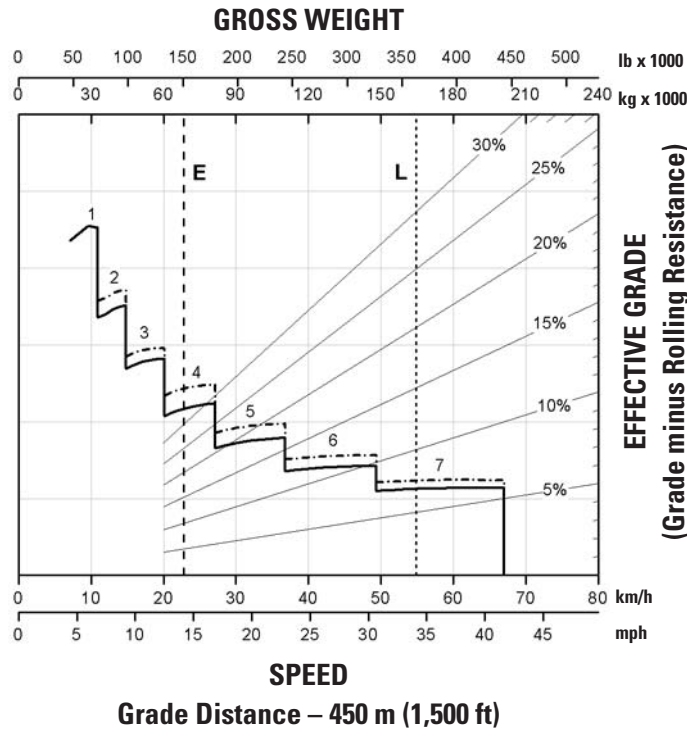
To determine retarding performance: Add lengths of all downhill segments and, using this total, refer to proper retarding chart. Read from gross weight down to the percent effective grade. Effective grade equals actual % grade minus 1% for each 10 kg/t (20 lb/ton) of rolling resistance. From this weight-effective grade point, read horizontally to the curve with the highest obtainable gear, then down to maximum descent speed brakes can properly handle without exceeding cooling capacity. The following charts are based on these conditions: 32° C (90° F) ambient temperature, at sea level, with 24.00R35 (E4) tires.

**NOTE:** Select the proper gear to maintain engine rpm at the highest possible level, without overspeeding the engine. If cooling oil overheats, reduce ground speed to allow transmission to shift to the next lower speed range.

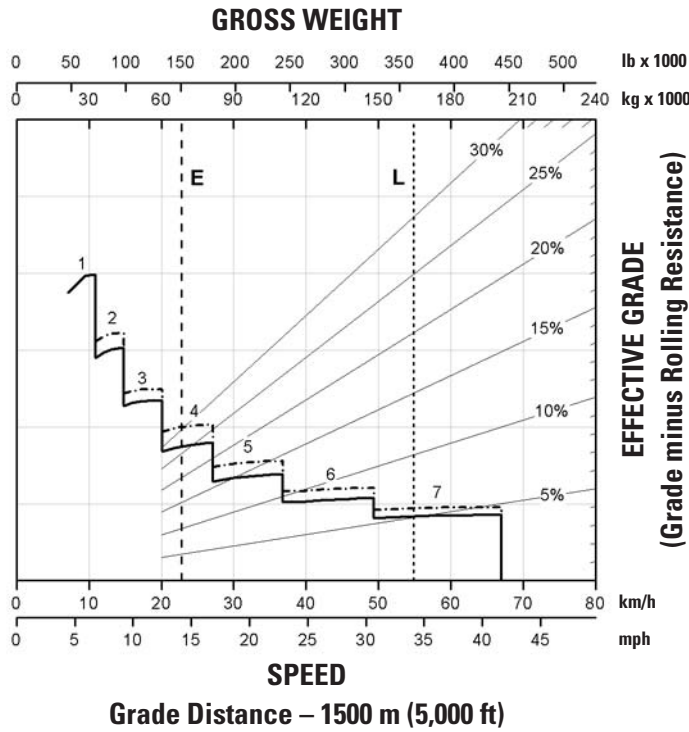
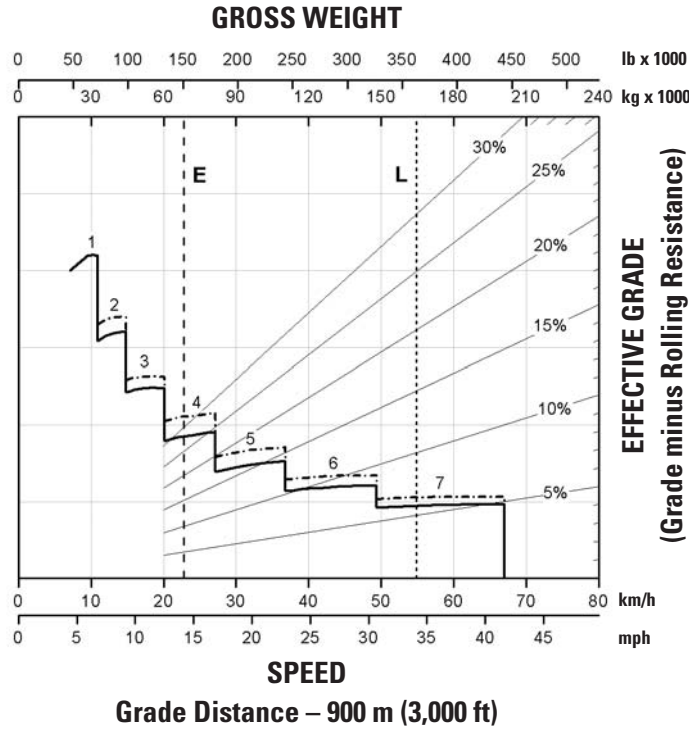


# 777G Off-Highway Truck Specifications

## Retarding Performance (Tier 2 Equivalent)



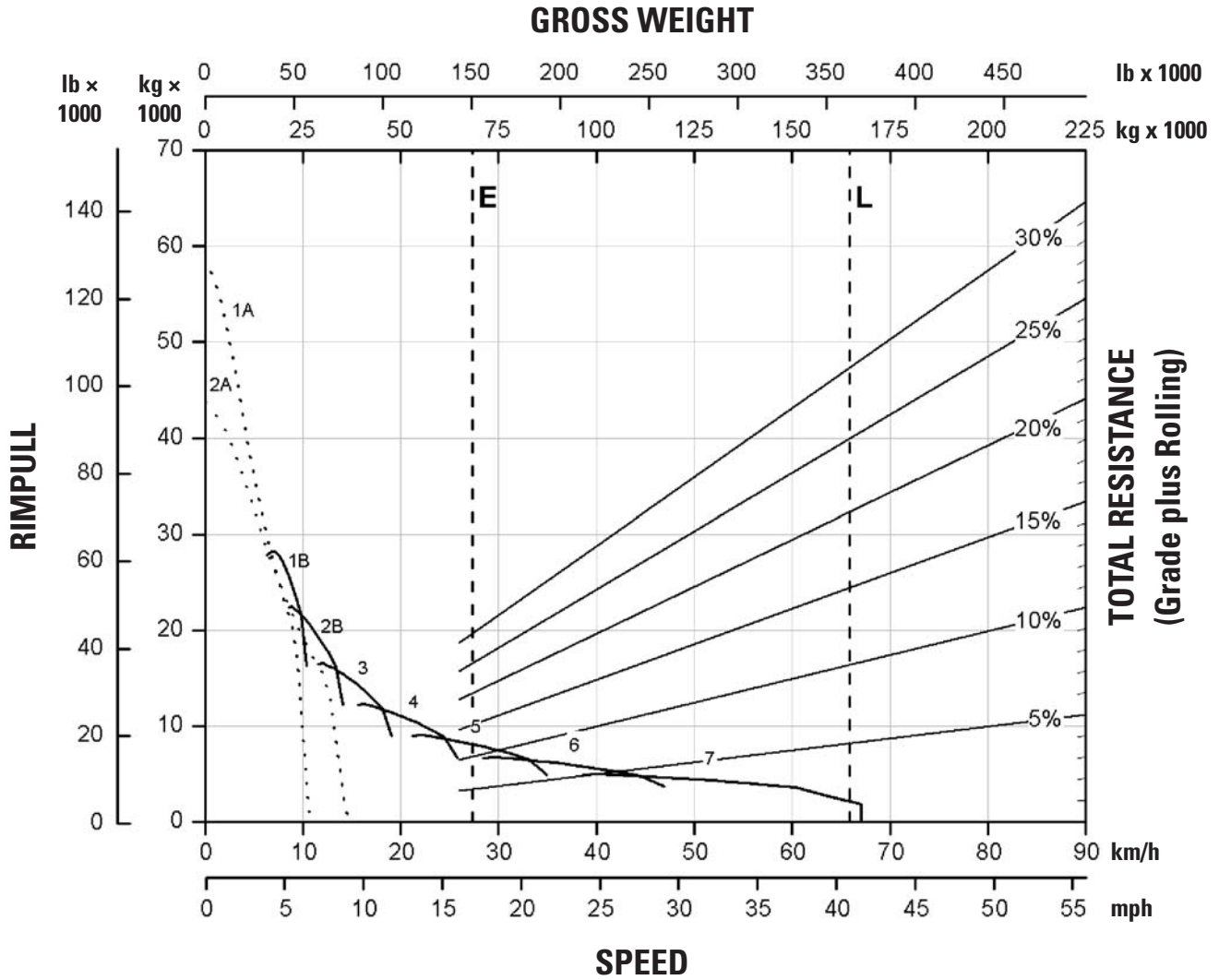
# Retarding Performance (Tier 2 Equivalent)



# 777G Off-Highway Truck Specifications

## Gradeability/Speed/Rimpull (Tier 2 Equivalent)

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 10 kg/t (20 lb/ton) of rolling resistance. From this weight-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.





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

## POWER TRAIN

- Autostall
- Engine idle shutdown
- Air-To-Air Aftercooler (ATAAC)
- Air cleaner with precleaner (2)
- Automatic cold mode idle control
- Electric priming pump
- Electric cold weather start
  - (two starters and four batteries)
- Ether starting aid
- Exhaust, muffler
- Fuel filter/water separator
- QuickEvac™
- Turbocharger (2)
- Braking system:
  - Brake wear indicator
  - Automatic Retarder Control (ARC)
    - (utilizes oil-cooled, multiple disc brakes)
  - Brake release motor (towing)
  - Manual retarder (utilizes oil cooled, multiple disc brakes)
  - Oil-cooled, multiple disc (front/rear)
  - Parking
  - Secondary
  - Service
- Transmission
  - Auto neutral idle
  - APECS Software
  - ECPC
- Part Throttle Shifting
  - 7 speed automatic powershift with Torque Shift Management electronic clutch pressure control
  - Body up shift inhibitor
  - Directional shift management
  - Downshift inhibitor
  - Neutral start switch
  - Neutral coast inhibitor
  - Reverse shift inhibitor
  - Reverse neutralizer during dumping
  - Programmable top gear selection

## SUSPENSION SYSTEMS

- Suspension, rear (EU Compliant)

## ELECTRICAL

- Alarm, backup
- Alternator, 115 ampere
- Auxiliary jump start receptacle
- Batteries, maintenance-free, 12V (4), 190 amp-hour
- Electrical system, 25 AMP, 24V to 12V converter
- Lighting system
  - Backup light (halogen)
  - Directional signals/hazard warning, (front and rear LED)
  - Headlights, (halogen) with dimmer
  - Payload, indicator lights
  - Operator access courtesy lights
  - Side profile lights
  - Stop/tail lights (LED)
  - Service lights
- MINESTAR ready

## OPERATOR ENVIRONMENT

- Air conditioning
- Ashtray and cigarette lighter
- Coat hook
- Cup holders (4)
- Diagnostic connection port, 24V
- Entertainment Radio Ready
  - 5 amp converter
  - Speakers
  - Antenna
  - Wiring harness
- Gauges/indicators
  - Air cleaner service indicator
  - Brake oil temperature gauge
  - Coolant temperature gauge
  - Hour meter
  - Tachometer
  - Engine overspeed indicator
  - Fuel level
  - Speedometer with odometer
  - Transmission gear indicator
- Heater/defroster (11 070 kCal/43,930 BTU)
- Auto temp control
- Fluid level monitoring

- Hoist lever
- Horn, electric
- Light – dome
- Light – courtesy
- Load counter, automatic
- Advisor display
- VIMS
- TPMS
- Foot rest
- Mirrors – heated
- Power port, 24V and 12V (2)
- ROPS cab, insulated/sound suppressed
- Cat Comfort Series III
  - full air suspension,
  - retractable 3 point seat belt with shoulder harness
- Steering wheel, padded, tilt and telescopic
- Storage compartment
- Sun visor
- Throttle lock
- Window, right side, hinged access/egress
- Electric left side window control
- Windshield wiper (intermittent) and washer
- Tinted, laminated glass

## TECHNOLOGY PRODUCTS

- Product Link Ready (Level 1)
- TKPH/TMPH (Tons Kilometer Per Hour/ Tons Mile Per Hour)
- Object Detection (4 cameras, 4 radars)
- Adaptive economy mode

## GUARDS

- Engine crankcase
- Driveline
- Fan and A/C

## FLUIDS

- Extended Life Coolant to –35° C (–30° F)

Standard equipment (cont'd)

## **OTHER STANDARD EQUIPMENT**

Body mounting group  
Body safety pin (secures body in up position)  
Body down indicator  
CD ROM parts book  
Center mounted rims  
Fuel tank (1136 L/300 gal)  
Ground level battery disconnect  
Ground level engine shutdown  
Ground level grease fittings  
Reservoirs (separate)

- Brake/hoist
- Steering
- Transmission/torque converter

Rims 19.5 × 49  
Rock ejectors  
Supplemental steering (automatic)  
Tie down eyes  
Tow hooks (front)/Tow pin (rear)  
Vandalism protection locks  
Wiggins fast fuel  
Traction Control System (new version)  
Attachment Zone

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

Body heat

Body liner

Body side boards

Cab precleaner

Cat Engine Brake

Clustered grease fittings

Cold weather packages

Extended Life Brakes

Fluid fill service center

HID lights

Mirrors, convex

Mirrors, heated

Spare rim

Visibility package

(meets ISO 5006 requirements)

Wheel chocks

Work Area Vision System (WAVS)

# 777G Off-Highway Truck

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