### Engine
- **Engine Model**: Cat® C6.6 ACERT™
- **Flywheel Power**: 141 kW / 189 hp

### Buckets
- **Capacity – General Purpose**: 2.45 m³ / 3.2 yd³
- **Capacity – Multi-Purpose**: 1.9 m³ / 2.48 yd³

### Weights
- **Operating Weight**: 20 220 kg / 44,577 lb
963D Track Loader

The 963D has increased horsepower, excellent maneuverability and a redesigned operator cab for operator comfort.

**Engine**

✔ The Cat® C6.6 ACERT engine utilizes the Caterpillar® Common Rail fuel delivery system. Designed for performance, durability, serviceability, and fuel economy, it meets EPA Tier 3, EU Stage IIIa and Japan Ministry of Land, Infrastructure & Transport Step 3 emission standards. pg. 4

**Operator Station**

✔ Experience a high level of efficiency, comfort and productivity with the new D-series cab. The cab features a new gauge cluster, a fully air-suspension seat, the new seat mounted controls, an automatic air climate control and provides excellent visibility. pg. 6

**Monitoring System**

✔ The 963D incorporates a new smooth, rounded gauge cluster with integral defroster vents. Together with the optional Cat® Messenger, it displays all necessary information within the operator’s normal line of sight. pg. 8

**SystemOne™ Undercarriage**

The revolutionary Cat SystemOne Undercarriage provides maximum undercarriage life and reliability no matter the application, environment or underfoot conditions. Built to last longer and require less maintenance, it ensures a dramatic drop in owning and operating costs. pg. 12

**Versatility**

A large choice of buckets, Ground Engaging Tools (GET), and attachments, allow configuration of the 963D for maximum performance in any job. pg. 14

Increased horsepower, excellent maneuverability, redesigned operator cab for comfort, the revolutionary SystemOne™ undercarriage and the new implement system increase your productivity, drastically reduce your operating costs and make the new 963D unsurpassed in versatility.
Hydrostatic Drive

✔ The closed loop hydrostatic drive with electronic control provides precise modulation for quick, smooth operation and superior maneuverability. Shorter cycle times, high efficiency, and excellent maneuverability results in increased productivity. pg. 9

Implement System

✔ The 963D features a load sensing implement pump which reduces engine power consumption. The new electro-hydraulic implement controls lower the operator’s effort. And the new position sensing cylinders allow setting kickouts at any position from the cab. pg. 10

Structure

✔ The D-series Main Frame and Loader Tower provide durability, resistance to twisting, and a solid base for all components. The Z-bar linkage offers high breakout force and fast dump speed for enhanced productivity. pg. 11

Serviceability and Customer Support

✔ The new 963D is equipped with a tiltable cab that allows complete service of the hydraulic system. Daily maintenance checks are performed from the machine’s right side. pg. 16

Special Application Arrangements

Special arrangements – Waste Handling, Wide Gauge and more, are available or can be designed on request, to allow the 963D to work in special applications. pg. 18

✔ New Feature
Cooling module architecture. The cooling system is a single cooling unit, which includes Radiator, ATAAC, Oil cooler and Fan installation. The cooling module is located at the rear of the loader, away from dust and debris stirred up by the bucket while the machine is working. The radiator has 6.5 fins per inch (fpi) which helps reduce plugging.

**Cat C6.6 ACERT™.** The Cat® C6.6 is a 6.6 liter (403 in³) displacement, six-cylinder, in-line configured engine that utilizes the Caterpillar® Common Rail fuel system for fuel delivery. It uses ACERT™ Technology, a series of Caterpillar engineered innovations that provide advanced electronic control, precision fuel delivery and refined air management, resulting in outstanding performance and lower emissions.

The C6.6 with ACERT Technology offers a compact design with big, heavy-duty engine features for outstanding durability, reliability and performance. The C6.6 incorporates a new cross flow cylinder head design, 4 valve head and an ADEM™ A4 electronic controller. The C6.6 also features proven cylinder block, pistons and crankshaft and incorporates the common rail fuel system. ACERT™ technology enables the C6.6 engine to meet the U.S. EPA Tier 3, European Union Stage IIIa and Japan Ministry of Land, Infrastructure & Transport Step 3 emissions standards, which dramatically reduce nitrous oxides (NOx) and other emissions.

**Engine**

*Provides power, reliability and acts as a working counterweight in the rear of the machine, for optimum machine balance.*
ACERT™ technology used on the C6.6 consists of three basic building block systems: electronic control, fuel delivery, and air management. These have been refined to control the combustion process to a higher degree than ever before possible.

Electronic control ADEM™ A4.
The Advanced Diesel Engine Management – Electronic Control Module continuously monitors important engine conditions and functions. It uses sensors throughout the engine to regulate fuel delivery and all other engine systems that require input to manage load and performance. ADEM™ A4 is the brain behind engine responsiveness, self-diagnosis, controlling emissions, and fuel economy.

Fuel System.
Through multiple injection fuel delivery, fuel is introduced in the combustion chamber in a number of precisely controlled microbursts. Injecting fuel in this way allows for precise shaping of the combustion cycle. The ADEM™ A4 module directs the injectors to deliver precise quantities of fuel at exactly the right times during the combustion cycle.

This process provides precise control over a range of combustion variables, which can be regulated to produce higher performance with fewer emissions. Fuel is delivered at high pressure to each combustion chamber through a Caterpillar designed injector linked to a Common Rail fuel system.

Air Management.
Air management is a key concept in optimizing engine performance and controlling emissions. Engines must breathe clean cool air in order to perform. To aid this, the C6.6 uses a turbocharger fitted with a smart waste gate to give precise and reliable control of the boost pressure. A new cross-flow design in the cylinder head facilitates air movement, while tighter tolerances between the piston and cylinder liner reduce blow-by gases.

Fuel pump.
The C6.6 uses an oil-lubricated high-pressure fuel pump to feed the common rail.

Fuel Priming Pump.
An electrical fuel-priming pump, standard, is located between the fuel tank and the combined water separator/primary fuel filter. The triple fuel filters, water separator design, provides protection to the injection system against low-quality or contaminated fuel.

Starting System.
The Electronic Speed Selector Switch (A), a “rocker” switch located on the right console, sets the engine rpm. The ADEM A4 engine controller will always start the engine in low idle. The engine rpm can be seen on the digital display of the instrument cluster in the gage cluster or in the performance menu in Messenger.

Air-to-Air After cooler (ATAAC).
The air-to-air after cooler is a single pass, aluminum, heat exchanger or cooling system for the pressurized air coming from the turbocharger, before it enters the engine intake manifold. Cooling the pressurized air from the turbocharger increases the density of the engine’s intake air. The increased air density in the cylinders results in more power, improved combustion, and reduced exhaust emissions.

Serviceability.
Unit injectors can be serviced individually, without the need to service the whole fuel system.

Engine Installation.
The engine is installed using rubber mounts to reduce the transfer of engine vibration to the frame and cab, lowering operator vibration, sound levels, and fatigue.

Rear Engine Location.
Rear engine location allows excellent forward visibility, while serving as a working counterweight. It also helps reduce radiator plugging while providing easy service access to the engine and other major components.

Hydraulic on-demand fan.
The fan is a hydraulic demand type with optional reversible function, and operates normally in suction mode.

The complete cooling package has been designed for a very easy maintenance with a complete accessibility to the cores for cleaning. Rear grill and fan door swings out and latches.
Operator Station

Designed for operator comfort, convenience, and ease of operation throughout the workday.
**Working lights.** Eight working lights are available on the 963D. Four (2 front and 2 rear) are standard, four additional lights are optional.

**Storage spaces.** Storage spaces include space for lunch box, a beverage/ashtray holder, and a coat hook.

**Viewing Area.** Large windows use tinted glass to reduce glare and provide an excellent view to the bucket, tracks, and around the engine enclosure to the rear.

Side windows slide top down to allow the operator to let fresh air into the cab and communicate.

**Kickout settings.** Automatic kickouts are part of the electro-hydraulic controls; adjustable from inside the cab with a simple rocker switch. Kickout stops are hydraulically cushioned for greater operator comfort and less material spillage.

**Armrests.** The right hand side console features an adjustable armrest, wrist rest and joystick mount. The left side console is tiltable for improved ingress/egress and features adjustable armrest and control lever mount. Total adjustability lets the operator customize the armrests to the most comfortable position.

**Heating and Air Conditioning.** Air conditioning is standard on 963D. Both the air conditioning and the heater deliver filtered, pressurized, temperature-controlled air to the operator and windows through 10 louvered vents.

**Caterpillar Air-suspension Seat.** The Caterpillar air-suspension seat, with side-to-side isolator, is ergonomically designed and fully adjustable for maximum operator comfort and control. Retractable seat belt is 75 mm (3 in) wide for positive, comfortable restraint.

**Seat mounted controls.** Seat mounted controls provide less vibration for the operator and provide a combined seat and controls adjustment.

**Messenger.** Messenger is a new electronic monitoring system with real-time, visual feedback on engine and machine operating conditions. It provides information on diagnostic data, maintenance, and allows operating settings such as implement reactions.

**Electro-hydraulic implements controls.** The new electro hydraulic implement controls on the 963D provide the operator with responsive, smooth and precise control of bucket and lift arms. Choice of joystick or two-lever control is available for bucket lift and dump.

**Rearview Mirror.** The rearview mirror is located above the front windshield, maximizing the operator’s visibility.

**Dome Light.** A dome light is located in the cab headliner.

**Radio Installation Arrangement.** A standard feature in the cab is a Radio Installation Arrangement, which includes a 24-volt to 12-volt converter and speakers.

A Caterpillar heavy-duty (AM/FM) radio/CD player and satellite radios are available from dealers.

**Door release lever.** The door’s release lever is accessible from the ground to unlock the door conveniently, as well as from inside the cab.

**Machine Security System.** Eliminate machine theft and unauthorized usage with the Cat Machine Security System (MSS). It is integrated into the machine’s electronic system and can protect most brands of equipment by requiring a uniquely coded key to start the machine.
Monitoring System

The gauge cluster provides all necessary functions and information within the operator’s normal line of sight.

The 963D gauge cluster display. The gauge cluster displays all vital functions and alerts the operator to the nature of any abnormalities.

The 963D gauge cluster display includes:
- Four direct reading gauges
- Fifteen alert indicators
- A numeric message display

Alert indicators. The fifteen alert indicators used on the 963D are:
1. Reversible fan
2. Water separator
3. Fuel filters
4. Fuel level
5. Engine air filter
6. Machine security system
7. Either starting aid
8. Action lamp
9. Parking brake
10. Operator presence
11. Hydraulic lockout
12. Hydraulic oil filter
13. Bucket float
14. Lift kickout/lower kickout
15. Bucket leveler

Gauge cluster-self test. The gauge cluster self-test verifies that the main display module is operating properly every time the key start switch is turned from the “off” to the “on” position.
Hydrostatic Drive

The electronically controlled hydrostatic drive helps provide quick response for shorter cycle times and increased productivity.

The electronically controlled hydrostatic drive system automatically matches machine travel speed to the combined travel and implement loads on the machine, enabling maximum travel speed, up to the speed selected by the operator.

Electronic Hydrostatic Control (EHC). Hydrostatic system has integrated electro-hydraulic controls (EHC), which provide optimum performance and efficiency.

Variable Displacement Pumps and Drive Motors. Variable displacement pumps and drive motors are electronically controlled by the EHC, offering high efficiency and precise travel. Each track is independently driven by a separate hydraulic circuit consisting of one pump, connected by Cat XT-6™ hydraulic hose and couplings to a piston motor.

Fuel Management System. This system allows the operator to select a lower RPM setting for reverse. Three selections are available in Messenger to match the engine speed in reverse to the application. Full speed is achievable in all settings.

Travel Speeds. Travel speeds are infinitely variable between zero and top speed. Two speed modes “work” and “travel”, provide two different speed ranges to best match machine speed and torque to the job conditions for maximum productivity. Maximum travel speed is 10 kph (6.2 mph) when the switch is set in the travel position.

Hydrostatic Drive System Controls. The control systems allow quick speed and directional changes. Two power train control options are available:

1. The V-lever system includes a single speed direction control lever and steering pedals that can be adjusted from 35° to 50° depending on operator preference and allow precise control of each track independently and on-demand counter rotation. An emergency brake pedal is located between the two steering pedals.

2. The joystick system features an S-lever pattern steering including a single joystick handle for speed, direction and steering functions, foot rests and an emergency brake pedal. Counter rotation is possible from moving or immobile machine. This power train control system is comparable to the drive system known from the Cat Multi Terrain and Skid Steer Loaders. A black button is located on the top to activate the horn.

Speed Switches. Both systems include speed mode switches.

For the V-lever system a “work mode” and “travel mode” switch allows to best match the machine speed to various job conditions. Switching between travel and work mode takes effect immediately.

The joystick includes two yellow buttons for maximum transmission speed setting. It features three machine travel speed limits, to best match application and controllability requirements. Limit increase and decrease take effect immediately.

Steering. Steering is accomplished by changing relative pump flows and/or motor displacements, which causes one track to rotate slower than the other track.

Maneuverability. The hydrostatic drive train also offers independent power and control of each track, with fast acceleration, infinitely variable speeds, and automatic, on-the-go, direction changes for each track. The operator can command smooth “power turns” or even counter-rotation of the tracks by simply pushing one of the steering pedals, if the machine is equipped with a V-lever, or moving the joystick in the right/left axis while the machine is stationary. The Caterpillar hydrostatic drive system manages itself, freeing the operator to concentrate on using the Cat track loader’s superb agility, speed, and maneuverability to do more productive work.
**Electro-hydraulic Implement Controls.**
Electro hydraulic implement controls on the 963D provide the operator with responsive, smooth and precise control of bucket and lift arms. They also allow the operator to set personal parameters through Messenger such as implement reactions.

**Load sensing hydraulics.** The 963D features a load sensing hydraulic system that automatically adjusts to operating conditions to provide only the hydraulic flow required by the implement for improved fuel efficiency.

**Automatic kickouts.** The standard programmable automatic kickouts provide flexibility and productivity for precise load and dump target heights. Tilt and lift kickouts are set by positioning the bucket or work tool and setting a rocker switch in the cab.

**Position sensing cylinder.** Position sensing cylinders allows you to:
- Set lift and tilt kickouts at any positions according to the applications without operator leaving the cab
- Advanced automatic features as feather catch (accelerate and stop smoothly) and snubbing (smooths start and stop cylinder motion)
- Sensing of the cylinder end of stroke
- Prevent unintended motion

**Implement System**
*Work smart and move more.*
Mainframe and Loader Tower.
The 963D Main Frame and Loader Tower is a single, slab rails with reinforced cross members, with castings and forgings incorporated at points of high stress, to distribute those stresses over wider areas for long structural life.

Design. The part of the frame below the engine and operator’s station consists of two Slab-section side-frame rails, which are joined at the rear by a box-section cross member. The Slab-section 963D frame resists twisting and impact forces to provide a solid foundation for all the components it supports. Mounting points for the final drives, pivot shafts, and platform are built into each mainframe side rail.

Frame side plates. The frame side plates are made of mild steel, which provides strength and resists shock and bending stresses. “Deep penetrating”, “Backed up” welds are used for maximum strength.

Loader tower. The loader tower is integral with the basic main frame. The one slab plate continues forward to become one side of the loader tower in order to provide a smooth transition to loads from linkages to the mainframe rails. The loader tower provides a solid mount for lift arms, lift cylinders, and Z-bar tilt cylinder. A box-section cross member is welded below the two inboard loader tower plates to add strength. The equalizer bar, which connects the track roller frames to the main frame, is mounted below the loader tower. The result is an integrated main frame and loader tower assembly which will accommodate maximum load capability.

The engine is at the rear, where its weight serves as a “working counterweight” to balance the machine for full bucket loads without adding inefficient “dead” weight.

Z-Bar linkage. Breakout force is exceptionally high due to mechanical advantage of Z-bar linkage design, and hydraulic pressure applied to the head end of the tilt cylinder. Using a single tilt cylinder and linkage provides the operator a better view of the work area, bucket, and cutting edge.

Sealed Loader Linkage. The 963D linkage has fewer grease points compared to other linkage designs because every pin joint is sealed to keep grease in and dirt out. Fewer grease points and sealed pins means less downtime for maintenance allowing more working hours between servicing.

Lift Arms. The two arms are welded into a single unit, using a weld-fabricated cross-tube. The fabricated cross-tube and tilt lever use forging at high stress points to spread the loads for long life.

The tilt link (Dog Bone) is a single forging. The 963D linkage design combines the advantages of strength and durability with minimum structural weight, so that productivity is not penalized by excess weight in the linkage.
SystemOne™ Undercarriage

The SystemOne undercarriage was designed exclusively for Caterpillar machines to reduce customers’ operating costs, downtime and maintenance intervals.

Revolutionary Undercarriage.
SystemOne™ is the latest innovation in a century of undercarriage leadership. It was designed to reduce customers’ operating costs and maintenance intervals.

The revolutionary Cat SystemOne™ Undercarriage provides maximum undercarriage life and reliability no matter the application, environment or underfoot conditions. Built to last longer and require less maintenance it ensures a dramatic drop in operating costs.

Track Roller Frames. The track roller frames are a welded, box section design, which provides strength and resistance to bending without adding extra weight. The track roller frames are pinned at the rear to the loader main frame with pivot shafts, which allow the front of the track roller frames to swing or oscillate about the pivot shafts at the rear.

Guiding System. Better, more rigid guiding. The guiding system contacts link rails instead of pin ends and helps keep the track within the roller system.

Carrier Rollers. The 963D has seven track rollers, which spread machine weight over a large area and two upper carrier rollers on each side mounts to the machine mainframe.
The rollers and carrier rollers have been redesigned to run with the system. This will lead directly to better guiding. All rollers in this new system are single flange rollers with increased flange diameter. The increased flange diameters increase guiding capability.

**Idlers.** Idlers provide superior structural support and rebuild capabilities. Special heat treatment of the idler rim ensures proper hardness levels, which provides wear resistance. Cat’s Duo-Cone® seals give lifetime lubrication, which eliminates idler maintenance and lowers operating costs.

**Cartridge Joints.** Factory-sealed cartridge joints are welded to control end play. They offer improved seal integrity through an innovative new sealing system and do not depend on the link interface to remain sealed. As with all new Cat undercarriage products, they are filled with special oils.

**Track Shoes.** The shoes for SystemOne™ are unique to this system. Several track shoe types tailor your machine for work in all underfoot conditions. The SystemOne links have a straight rather than offset bolt hole pattern.

Double grouser standard or narrow track shoes are available. The standard shoe can be fitted with center hole to reduce material packing.

**Long-life Sprockets.** The rotating bushing design of the SystemOne track greatly reduces wear on the sprocket teeth, allowing the sprockets to be used over the lives of multiple undercarriages.

**Oscillating Undercarriage.** The undercarriage on the 963D features an “oscillating track roller frame design” which decreases ground shock to the machine, increases machine stability, and provides a smoother, more comfortable ride for the operator. Oscillating track roller frames keep more of the track on the ground when operating on uneven terrain, which increases machine stability, felt by the operator, allowing faster machine operation, increased machine productivity and reduced operator fatigue.

**Track Adjuster.** The track adjuster and mechanical recoil system uses a large recoil spring and grease filled adjustment cylinder, which allows the idler to move forward and back to maintain proper track tension as it absorbs undercarriage shock loads.

**Equalizer Bar.** The equalizer bar is pinned in its center to the machine mainframe and at the ends to each track roller frame. This allows the forward ends of the track roller frames to oscillate, or move vertically, to keep more track on the ground in uneven underfoot conditions. The equalizer bar also provides a more stable work platform for the operator, who will be comfortable working at faster speeds for increased productivity.
**Versatility**

The large variety of tasks an operator can perform with the standard machine and Work Tools has lead to the Caterpillar Track Loader’s reputation for versatility.

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**General Purpose Bucket.** The General Purpose (GP) bucket is designed for excellent loadability and long life in a broad range of applications such as hard bank excavating, stripping and stockpile loading. High-strength, low-alloy steel helps the bucket resist dents and abrasions. Rear edge of bucket is designed for improved efficiency when backdragging.

The shell-tine design in the bucket back and floor offers increased structural strength.

**Multi-Purpose Bucket.** The Multi-Purpose (MP) bucket combines the performances of a standard bucket, dozer blade and clamp. The bucket provides maximum versatility combined with strength to handle a broad range of applications, such as loading, stripping topsoil, clearing, bulldozing, picking up debris and grading.

**General Purpose Landfill Bucket.**

With the integrated trash-rack, the General Purpose Landfill (GP Landfill) bucket becomes ideal for digging, loading and carrying as well as dozing and spreading material at landfills, or loading refuse at a transfer station.

**Multi-Purpose Landfill Bucket.**

The Multi-Purpose Landfill (MP Landfill) bucket combines the versatility of a Multi-Purpose bucket with the performance of a landfill design. Constructed with a trash-rack for increased capacity, extra strength and better load retention. Ideal for applications in the harsh refuse market, whether digging or spreading material at the landfill or grasping and loading refuse at a transfer station.

**Bucket Protection Options.** Caterpillar offers several types of adapters, tips, and cutting edges, which increase bucket life and maximize performance.

**K Series™ Tooth System.** The K-Series tooth system provides longer tip and adapter life, faster cycle time with greater bucket fills and reduced machine strain. Therefore, it contributes to the reduction of operating costs.

Easy and convenient during the installation, this new system provides a very good response to the need of reliability and durability of such components.
Reversible Tips. Each tip ear has a retainer groove with a locking recess. Tips can be run in one direction, then “flipped,” or reversed, to get the maximum use of wear material from the tip.

Tip Options. Caterpillar GET offers a variety of tips to better accommodate your needs in any working environment, whether that is high impact or general-purpose applications.

These and other GET options are available from your Caterpillar Dealer.

Penetration Tips. Penetration tips are extremely strong and are for use in high impact and pry-out work such as rock.

General Duty Tips. General duty tips are for use in most general applications where breakage is not a concern.

Extra-duty, Tips. Extra-duty long tips are for use in general loading and excavation work. They have thirty-six percent more wear material than on standard tip. Provides increased strength, extended service life, and low cost-per-hour.

Ripper-Scarifier. A radial ripper-scarifier is available for the 963D as an attachment. It is mounted with two pins pressed into each side of the main frame. Two cylinders raise and lower the ripper. The ripper beam has three pockets for holding ripper shanks. The linkage pins do not require lubrication.

The 963D ripper-scarifier is intended for ripping frozen ground, asphalt and easily ripped rock.

Tiltable Cab. The 963D is equipped with a tiltable cab. This new feature makes the maintenance and the repairs easier. By tilting the cab, you can access to the drive train and perform complete service of the hydraulic system.

Right side compartments.

- The two maintenance-free batteries, the machine ECM and the window washer reservoir are located on the right side compartment, accessible from the ground.
- The engine compartment has large hinged openings with latches. On the door, you can clip a grease gun.

You can access to the following maintenance and service points:

- Primary and secondary Engine Air filter
- Engine air pre-cleaner
- Water in fuel separator
- Fuel filters
- Engine crankcase breather filter
- Engine oil filter
- The Electric fuel-priming pump
- The dipstick for the oil level in the engine crankcase and the fill tube.
- The electrical disconnect switch.

Serviceability and Customer Support

Grouped service points and excellent accessibility make the 963D easy to maintain.
Fuel fill. The fuel tank and the optional quick fill port are located on the right side compartment, below the cab access.

Cooling System. The fan and the grill swing open, providing excellent access for clean-out and maintenance. The heavy duty latched grill minimizes debris build-up.

Ground Level Shutdown. The Engine Control ECM monitors the status of a switch that is mounted behind a cover at the rear of the machine, allowing the machine to be shut down from ground level in emergency situations.

Shovel holder. As an optional attachment, a shovel holder, located on the rear right side of the machine, is available for undercarriage cleaning.

Left side compartments. The lower part of the compartment door can be used as a step to access the shunt tank fill, the air pre-cleaner (if equipped) and allows easy cleaning of the rear window.

Hydraulic Tank. The hydraulic tank is located in the front of the machine. It is accessible without raising the lift arms. A site gauge allows oil level check from the ground.

Fuse Panel. The fuse panel is located to the inside of the cab, on the rear right side console. It includes the ET port.

Easy Diagnosis. The gauge cluster and self-diagnosing Electronic Hydraulic Control (EHC) work together to warn against faults to reduce downtime.

S-O-S Fluid Taps. Simplifies drawing fluid samples for Scheduled Oil Sampling and reduces sample contamination.

Quick-Connect Fittings. The quick-connect hydraulic grouped pressure taps allow quick diagnosis of the hydrostatic drive and the implement hydraulic systems.

Product Link. This attachment allows a customer or dealer to remotely obtain machine diagnostics. Product Link provides updates on service meter hours, machine condition, machine location, and integrated mapping/route planning.

Complete Customer Support. Cat field service technicians have the experience and tools necessary to service your loader on site. Technical experts at the dealership and Caterpillar can provide additional assistance to field service technicians as needed. When on-site repair isn’t enough, Cat dealerships are fully equipped to service your loader quickly.

SAFETY.CAT.COM™.
With the addition of certain special modifications, the capabilities of the 963D can be further expanded to handle some very harsh working conditions.

**Waste Handling/Demolition Arrangements.** Waste Handling arrangements provide added protection and are designed to make the 963D perform well in landfills, or any waste handling or demolition applications where the machine spreads, compacts, sorts, shreds and crushes materials.

**Shiphold Arrangement.** The 963D with its low ground pressure and excellent stability works well on top of loose materials, cleaning the cargo from the sides of the holds and moving it into position for the unloading system. Lifting eyes are included so that the 963D can be lifted from the dock to the hold.

**Wide Gauge.** For underfoot conditions that require even lower ground pressure than the standard 963D undercarriage the gauge of the machine can be widened by 250 mm (9.8 inches) and the track shoe width increased to 800 mm (31.5 inches). The ground pressure is decreased to 53 kPa (7.7 psi).

**Custom Products Arrangements.** Other arrangements beyond those shown here are available. For other custom-designed arrangements for specific applications, contact your Caterpillar Dealer.
### Engine

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
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<tbody>
<tr>
<td>Engine Model</td>
<td>Cat® C6.6 ACERT™</td>
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<tr>
<td>Flywheel Power</td>
<td>141 kW 189 hp</td>
</tr>
<tr>
<td>Net Power – Caterpillar</td>
<td>141 kW 189 hp</td>
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<tr>
<td>Net Power – ISO 9249</td>
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<tr>
<td>Net Power – SAE J1349</td>
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<tr>
<td>Bore</td>
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<td>Stroke</td>
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<tr>
<td>Displacement</td>
<td>6.6 L 403 in³</td>
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</table>

### Fuel Tank

- **Capacity**: 400 L 105.6 gal

### Cooling System

- **Capacity**: 31.5 L 8.3 gal

### Crankcase (with Filter)

- **Capacity**: 16.5 L 4.4 gal

### Final Drives (each)

- **Capacity**: 15 L 4 gal

### Hydraulic Tank

- **Capacity**: 90 L 23.7 gal

### Pivot Shaft

- **Capacity**: 1.8 L 0.5 gal

### Weights

- **Operating Weight**: 20 220 kg 44,577 lb

### Buckets

- **Capacity – General Purpose**: 2.45 m³ 3.2 yd³
- **Capacity – Multi-Purpose**: 1.9 m³ 2.48 yd³

### Ripper Specifications

- **Type**: Radial
- **Number of pockets**: 3
- **Overall Width/Beam**: 1950 mm 76.7 in
- **Shank cross section**: 58.5 mm × 50 in × 138 mm 5.4 in
- **Ground Clearance**: 595 mm 23.4 in
- **Penetration**: 295 mm 11.6 in
- **Ripping Width**: 1836 mm 72.3 in
- **Cylinders – Bore**: 114.3 mm 4.49 in
- **Cylinders – Stroke**: 289 mm 11.3 in
- **Addition to Machine Length due to Ripper (in Transportation Position)**: 610 mm 24 in

### Hydraulic System – Equipment

- **Type**: Closed center, load sensing/piston
- **Output**: 209 L/min 55.2 gal/min
- **Main Relief Valve Setting**: 27 500 kPa 3,989 psi
### Standards

**ROPS/FOPS**

- The operator sound exposure $Leq$ (equivalent sound pressure level) measured according to the work cycle procedures specified in ANSI/SAE J1166 OCT 98 is 80 dB(A), for cab offered by Caterpillar, when properly installed and maintained and tested with the doors and windows closed.
- The operator sound pressure level measured according to the procedures specified in ISO 6396:1992 is 76 dB(A) for the cab offered by Caterpillar, when properly installed and maintained and tested with the doors and windows closed.
- Hearing protection is recommended when operating with an open operator station and cab (when not properly maintained or doors/windows open) for extended periods or in noisy environment.
- The exterior sound pressure level for the standard machine measured at a distance of 15 meters according to the test procedures specified in SAE J88 APR 95, mid-gear-moving operation, is 80 dB(A).
- The labeled sound power level is 111 dB(A) measured according to the test procedure and conditions specified in 2000/14/EC.

### Bucket Cycle Times

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<th>Seconds</th>
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<tbody>
<tr>
<td>Lift</td>
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<tr>
<td>Power Down</td>
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<tr>
<td>Float Down</td>
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<tr>
<td>Rackback at Max Height from full dump</td>
<td>1.5</td>
</tr>
</tbody>
</table>
### Dimensions
All dimensions are subject to change without notice.

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1</strong></td>
<td>Overall machine width without bucket:</td>
<td></td>
</tr>
<tr>
<td>    with standard tracks – 550 mm (21.6 in) shoes</td>
<td>2280 mm (89.7 in)</td>
<td></td>
</tr>
<tr>
<td>    with narrow tracks – 450 mm (17.7 in) shoes</td>
<td>2180 mm (85.8 in)</td>
<td></td>
</tr>
<tr>
<td><strong>2</strong></td>
<td>Ground clearance</td>
<td>471 mm (18.5 in)</td>
</tr>
<tr>
<td><strong>3</strong></td>
<td>Machine height to top of cab</td>
<td>3335 mm (131.3 in)</td>
</tr>
<tr>
<td><strong>4</strong></td>
<td>Length to front of track</td>
<td>4749 mm (187 in)</td>
</tr>
<tr>
<td><strong>5</strong></td>
<td>Overall machine length*</td>
<td>6941 mm (273.3 in)</td>
</tr>
<tr>
<td><strong>6</strong></td>
<td>Carry position approach angle</td>
<td>15°</td>
</tr>
<tr>
<td><strong>7</strong></td>
<td>Digging depth*</td>
<td>138 mm (5.4 in)</td>
</tr>
<tr>
<td><strong>8</strong></td>
<td>Maximum rollback at ground</td>
<td>43°</td>
</tr>
<tr>
<td><strong>9</strong></td>
<td>Maximum rollback at carry position</td>
<td>50°</td>
</tr>
<tr>
<td><strong>10</strong></td>
<td>Bucket height in carry position</td>
<td>457 mm (18 in)</td>
</tr>
<tr>
<td><strong>11</strong></td>
<td>Reach at full lift height and 45° dump*</td>
<td>1373 mm (54 in)</td>
</tr>
<tr>
<td><strong>12</strong></td>
<td>Clearance at full lift height and 45° dump*</td>
<td>2915 mm (114.8 in)</td>
</tr>
<tr>
<td><strong>13</strong></td>
<td>Maximum rollback, fully raised</td>
<td>52°</td>
</tr>
<tr>
<td><strong>14</strong></td>
<td>Maximum dump, fully raised</td>
<td>53°</td>
</tr>
<tr>
<td></td>
<td>Grading angle</td>
<td>63°</td>
</tr>
<tr>
<td><strong>15</strong></td>
<td>Height to bucket hinge pin</td>
<td>3940 mm (155.1 in)</td>
</tr>
<tr>
<td><strong>16</strong></td>
<td>Overall machine height, bucket fully raised</td>
<td>5402 mm (212.7 in)</td>
</tr>
<tr>
<td><strong>17</strong></td>
<td>Height to top of seat with headrest</td>
<td>2790 mm (109.8 in)</td>
</tr>
<tr>
<td><strong>18</strong></td>
<td>Height to top of stack</td>
<td>2953 mm (116.3 in)</td>
</tr>
</tbody>
</table>

* With general purpose bucket and extra duty teeth.

Dimensions vary with bucket. Refer to Operating Specifications chart.
## Operating Specifications

<table>
<thead>
<tr>
<th>Attachments on bucket cutting edge</th>
<th>General purpose bucket</th>
<th>Multi purpose bucket</th>
<th>Flush mounted teeth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bucket weight</td>
<td>kg</td>
<td>1508</td>
<td>1866</td>
</tr>
<tr>
<td></td>
<td>lb</td>
<td>3,324.5</td>
<td>4,113.8</td>
</tr>
<tr>
<td>Rated load nominal heaped §</td>
<td>kg</td>
<td>3958</td>
<td>4214</td>
</tr>
<tr>
<td></td>
<td>lb</td>
<td>8,721.4</td>
<td>9,290.2</td>
</tr>
<tr>
<td>Rated capacity nominal heaped</td>
<td>m³</td>
<td>2.3</td>
<td>2.45</td>
</tr>
<tr>
<td></td>
<td>yd³</td>
<td>3</td>
<td>3.2</td>
</tr>
<tr>
<td>Struck capacity</td>
<td>m³</td>
<td>2</td>
<td>2.14</td>
</tr>
<tr>
<td></td>
<td>yd³</td>
<td>2.61</td>
<td>2.79</td>
</tr>
<tr>
<td>Bucket width overall * #</td>
<td>mm</td>
<td>2508</td>
<td>2612</td>
</tr>
<tr>
<td></td>
<td>in</td>
<td>98.7</td>
<td>102.8</td>
</tr>
<tr>
<td>Teeth</td>
<td>none</td>
<td>8 bolt-on with replaceable tips</td>
<td>none</td>
</tr>
</tbody>
</table>

### Dimensions and weights

| Overall height | mm | 3335 | 3335 | 3335 | 3335 | 3335 | 3335 | 3335 |
| | in | 131.3 | 131.3 | 131.3 | 131.3 | 131.3 | 131.3 | 131.3 |
| Overall operating height * | mm | 5402 | 5402 | 5402 | 5402 | 5402 | 5402 | 5402 |
| | in | 212.6 | 212.6 | 212.6 | 212.6 | 212.6 | 212.6 | 212.6 |
| Clearance at 45° dump max lift * | mm | 3155 | 2915 | 3068 | 3000 | 2772 | 2909 | 2951 |
| | in | 124.2 | 114.7 | 120.7 | 118.1 | 109.1 | 114.5 | 116.1 |
| Reach at 45° dump max lift * | mm | 1160 | 1373 | 1215 | 1079 | 1253 | 1199 | 1379 |
| | in | 45.7 | 54.1 | 47.8 | 42.5 | 49.3 | 44 | 55 |
| Reach at 45° dump | mm | 1784 | 1899 | 1806 | 1598 | 1650 | 1607 | 1940 |
| | in | 70.2 | 74.8 | 71.1 | 62.9 | 65 | 63.3 | 76.4 |
| Bottom dump clearance | mm | 3450 | 3450 | 3450 | 3450 | 3450 | 3450 | 3450 |
| at 45° dump max lift | in | 135.8 | 135.8 | 135.8 | 135.8 | 135.8 | 135.8 | 135.8 |
| Bottom dump reach | mm | — | — | — | 627 | 627 | 627 | — |
| at 45° dump max lift | in | — | — | — | 24.7 | 24.7 | 24.7 | — |
| Reach with lift arm horizontal and bucket level | mm | 2289 | 2604 | 2386 | 2346 | 2622 | 2447 | 2601 |
| | in | 90.1 | 102.5 | 93.9 | 92.4 | 103.2 | 96.4 | 102.4 |
| Overall length – bucket level on ground | mm | 6584 | 6941 | 6706 | 6698 | 7013 | 6820 | 7087 |
| | in | 258.2 | 273.3 | 264 | 263.7 | 276.1 | 268.5 | 271.9 |
| Digging depth * | mm | 80 | 138 | 115 | 161 | 209 | 191 | 95 |
| | in | 3.1 | 5.4 | 4.5 | 6.3 | 8.2 | 7.5 | 3.7 |
| Full dump at max lift * | Deg | 53 | 53 | 53 | 43 | 43 | 43 | 53 |
| Carry height * | mm | 457 | 457 | 457 | 540 | 540 | 540 | 457 |
| | in | 18 | 18 | 18 | 21.6 | 21.6 | 21.6 | 18 |
| Rackback at carry * | Deg | 50 | 50 | 50 | 52 | 52 | 52 | 50 |
| | Deg | 43 | 43 | 43 | 45 | 45 | 45 | 43 |
| Grading angle max * | Deg | 63 | 63 | 63 | 63 | 63 | 63 | 63 |
| Static tipping load min *** | kg | 14 969 | 14 462 | 14 685 | 14 487 | 14 124 | 14 208 | 14 815 |
| | lb | 31,883.1 | 31,833.1 | 32,375 | 31,938.3 | 31,138 | 31,323.3 | 32,661.5 |
| Breakout with tilt cylinders | deg | 14 695 | 14 462 | 14 685 | 14 487 | 14 124 | 14 208 | 14 815 |
| | deg | 31,883.1 | 31,833.1 | 32,375 | 31,938.3 | 31,138 | 31,323.3 | 32,661.5 |
| Lift capacity to full lift – bucket raked | kg | 8983 | 8479 | 8609 | 8382 | 8152 | 8203 | 8703 |
| | lb | 19,407 | 18,693 | 18,979.57 | 18,479 | 17,972 | 18,084.5 | 19,186.8 |
| Lift capacity at ground line – bucket raked | kg | 18 574 | 18 655 | 19 031 | 18 559 | 17 888 | 18 082 | 19 300 |
| | lb | 40,946.6 | 41,127 | 41,956 | 40,915.5 | 39,432.6 | 39,863.9 | 42,549 |
| Shipping weight without bucket ** | kg | 18 330 | 18 330 | 18 330 | 18 385 | 18 385 | 18 385 | 18 385 |
| | lb | 40,410.7 | 40,410.7 | 40,410.7 | 40,532 | 40,532 | 40,532 | 40,532 |
| Operating weight with bucket *** | kg | 20 220 | 20 592 | 20 433 | 20 710 | 20 975 | 20 911 | 20 332 |
| | lb | 44,577.4 | 45,397.5 | 45,047 | 45,657.7 | 46,241.9 | 46,100.8 | 44,824.3 |

* SAE J732 JUN92
** With 10% fuel. All other fluid compartments full. No operator, no bucket pins.
*** Full fuel, 75 kg (165 lb) operator, standard machine.
# Width at cutting edge
§ Calculation based on 1602 kg/m³ (2,700 lb/yd³) of loose dirt.
Standard Equipment

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

ELECTRICAL
- Alternator, 24 volt, heavy duty brushless
- Alarm, backup
- Horn, electric
- 2 heavy duty batteries, high output, maintenance free, 1120 CCA
- Switch, main disconnect
- Starter, electric (heavy duty, 24 volt)
- Four halogen lights, two forward facing, roof mounted; two rearward facing, integrated in A/C unit

OPERATOR ENVIRONMENT
- Pressurized, sound suppressed, ROPS/FOPS cab
- Cab, windows, glued
- Cat Messenger
- Side sliding windows
- Air conditioning and heater/defroster with temperature control
- Seat, fabric-covered, air suspended, adjustable, with side-to-side isolator
- Seat belt, retractable
- Electro Hydraulic Seat mounted control levers
- Control, joystick, bucket gp

Electronic Monitoring System with gauges for:
- Engine coolant temperature
- Hydraulic oil temperature
- Engine oil pressure
- Fuel level
- Mirror, rearview, inside
- Radio-ready. Includes 24 to 12 volt converter, speakers, antenna and 12 volt power outlet
- 12 volt outlets (2)
- Coat hook
- Storage compartments under left armrest
- Document holder on right console
- Floor mat, rubber, heavy duty
- Windshield washers and wipers, front and rear
- Durable metal roof
- Parking brake switch and “brake-on” indicator light

POWER TRAIN
- Caterpillar C6.6 ACERT engine diesel engine, turbo charged with ATAAC
- Modular cooling system for engine air intake, oil and water
- Fan radiator, electronically controlled, hydraulically driven, temperature sensing, on demand
- Electro Hydrostatic Control (EHC) for transmission with travel and work modes
- Fuel priming pump, electric
- Water separator
- Air inlet
- Air cleaner dry-type, axial seal with integral pre-cleaner and dust ejection system, electronic filter condition indicator
- Muffler, under hood
- Starting aid ether injection
- Caterpillar extended life coolant
- Fuel, tank

UNDERCARRIAGE
- Caterpillar SystemOne track (38 sec.) 1850 mm (72.8 in) track gauge
- Final drive, standard
- Track, 550 mm (21.6 in), double grouser
- Track adjuster, hydraulic
- Sprocket rims, with replaceable bolt-on segments
- 7 single flange track rollers per side, with two upper carrier rollers, lifetime lubricated
- Conventional idlers, lifetime lubricated
- Idler, scraper
- Oscillating track roller frames

HYDRAULIC
- Oil change, standard
- Hydraulic oil
- Hydraulic, 2 way valve

GUARDS
- Guard, front
- Guard, rear
- Guards, full bottom

OTHER STANDARD EQUIPMENT
- Cab, tilt, locking bar
- Sound Suppression, Exterior
- Z-bar loader linkage
- Caterpillar Product Link 321 (for selected territories)
- Load sensing variable displacement implement pump
- Implement cylinders with integrated positioning sensors
- Operator programmable lift and tilt kickouts
- Engine enclosure with lockable doors
- Radiator core 6.5 fpi, debris resistant
- Hinged Radiator Guard and swing out fan
- Ecology grains on hydraulic tank
- Product Link ready
- Oil sampling valves
- Hydraulic hoses, Caterpillar® XT
- Hydraulic Oil, HYDO Advanced 10

WARNING DECALS
- Warning decals, ANSI, for NACD
- Warning decals, ISO

SERVICE INSTRUCTIONS
- English Instructions included in North America and Canada only
Optional Equipment
Optional equipment may vary. Consult your Caterpillar dealer for details.

ELECTRICAL
Beacon, rotating
Lights, four, extra

IMPLEMENT CONTROLS
Control, joystick, GP bucket
Control, joystick, MP bucket
Control, two levers, GP bucket

OPERATOR ENVIRONMENT
Cat® Messenger
Seat, air suspended, heated
Cab windows, front sealed

POWER TRAIN
Fan, demand, reversing
Tank fuel, fast fill
Air inlet, pre-cleaner, turbine
Oil change, high speed

UNDERCARRIAGE
Track, 450 mm (17.7"), DG, narrow
Track, 550 mm (21.6"), DG, center hole
Track, 550 mm (17.7"), DG, center hole
Track, 560 mm (22"), SG, extreme service
Track, 450 mm (17.7"), center hole, SG, extreme service
Track, 800 mm (31.5"), DG, wide gauge
Track, 560 mm (22"), center hole, SG, extreme service
Idler, with seal protection

GUARDS
Guard, idler
Guard, track roller
Guard, cab lights
Guard, lift lines
Screen, windshield

HYDRAULIC
Hydraulic oil, bio
Hydraulic, MP bucket, lines front
Hydraulic, ripper, lines rear
Hydraulic, MP bucket and ripper, lines front and rear

BUCKET ATTACHMENTS
Cutting edge, bolt-on
Segments, bolt-on
Edge, segments, bolt-on
Edge, segments, heavy duty
Teeth, general duty, K80
Teeth, penetration, K80
Teeth, extra duty, K80
Teeth, general duty, K90
Teeth, extra duty, K90
Tips, general duty, flush adapter

OTHER ATTACHMENTS
Cab tilt jack, hydraulic
Shovel holder
Bumper
Ripper, multi-shank
Hitch, drawbar
Hitch, standard
Striker bars, rear
Sediment pump, fuel tank
Heater, engine coolant, 120V
Heater, engine coolant, 240V
Counterweight, light
Counterweight additional
Antifreeze, −50°C (−58°F)

GUARDS
Guard front heavy duty
Lines GP-brake – M
Lines GP-Brake – Wide Gauge

BUCKET
General purpose
General purpose, flush mounted adapter
General purpose, landfill
Multi purpose
Multi purpose, extreme service
Multi purpose, landfill
Refuse