

277C, 287C, 297C

Multi Terrain Loaders

CATERPILLAR®



| | 277C | 287C | 297C |
|--|--------------------|--------------------|---------------------|
| Cat® C3.4 DIT Diesel Engine | | | |
| Net Power (SAE J1349) | 61 kW (82 hp) | 61 kW (82 hp) | 67 kW (90 hp) |
| Weights | | | |
| Operating Weight | 4307 kg (9,495 lb) | 4517 kg (9,958 lb) | 4599 kg (10,139 lb) |
| Operating Specifications | | | |
| Rated Operating Capacity at 50% Tipping Load | 1451 kg (3,200 lb) | 1724 kg (3,800 lb) | 1905 kg (4,200 lb) |

Features

Sealed and Pressurized Cab

Sealed and pressurized cab option provides a cleaner and quieter operating environment.

Seat Mounted Adjustable Controls

Ergonomic seat mounted adjustable controls and available air ride seat can be adjusted to meet your personal preference.

Suspended Undercarriage

Suspended undercarriage features low ground pressure so you can work on sensitive surfaces and in soft underfoot conditions.

High Performance Power Train

Increased horsepower and higher torque deliver outstanding performance.

High Flow XPS Hydraulic System

High flow XPS hydraulic system available on all models for applications demanding maximum hydraulic work tool performance.

More Work Tools

The broad range of performance matched Cat Work Tools make the Cat Multi Terrain Loader the most versatile machine on the job site.



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The Cat C-Series Multi Terrain Loaders lead the industry in operator comfort, performance and versatility. Inside the spacious operator station, feel the superior comfort of a sealed and pressurized cab. Adjustable seat mounted controls and an available air ride seat keep you comfortable throughout the work day. Low ground pressures, increased rated operating capacities, higher horsepower and improved drawbar performance help you get more done and increase your bottom line.

Operator Station

Superior comfort to keep you productive throughout the work day.

Superior Comfort

Comfort and ease of operation have been designed into every aspect of the operator station. The wide, spacious interior and uncluttered floor provide a comfortable work environment with excellent head, shoulder and leg room to keep productivity high and fatigue low.

Sealed and Pressurized Cab

Operators spend long hours in the machine. The optional sealed and pressurized cab keeps dust out and clean air in for greater operator comfort. Reduced sound levels within the cab also help reduce fatigue.

Seat Mounted Joystick Controls

Ergonomic, seat mounted joystick controls enable a wide range of comfortable operating positions for operators of any size. The seat and controls are independently adjustable to meet the specific needs of the operator.

Advanced Machine Information and Control System

The optional Advanced Machine Information and Control System (AMICS) provides easy to read analog gauges for hydraulic oil and engine coolant temperature. The electronic display provides additional operating information such as engine speed, job clock and diagnostic service codes. This display also provides the user interface for the optional AccuGrade Grade Control System. The Selectable Work Speed Control, Selectable Implement Control and Selectable Hystat Response Control modes allow the operator to “dial in” his machine to maximize production.

Additional Features for Maximum Comfort

The C-Series machines offer the following additional features to help you on the job:

- Air ride seat available for an unparalleled level of comfort in a multi terrain loader.
- Easy to read instrument panels.
- Optional air conditioner and heater for greater comfort in extreme conditions.
- Optional Selectable Pattern Control which allows the operator to select the control pattern they are most familiar with for greater productivity.



Hydraulics

Exceptional lift, breakout and power to meet your needs.



High Performance Hydraulic System

Maximum power and reliability are built into the Cat Multi Terrain Loader hydraulic system. In addition to providing power to the tracks, this system also powers the loader lift and tilt functions, powers the auxiliary circuit to drive work tools and drives the engine cooling fan. The C-Series hydraulic system features increased lift and tilt breakout forces allowing you to move more material and get more done. The continuous demand fan provides improved fuel efficiency, increased horsepower, reduced sound levels and improved cold weather performance. Cat ToughGuard™ hoses increase reliability and durability. High capacity hydraulic tank and side-by-side cooling package keep components cool for maximum durability.

High Flow XPS

High flow XPS hydraulic system is available on all models for greater machine versatility. Maximum performance can be maintained regardless of the work tool speed or conditions with this load sensing, pressure compensating system. Cat cooling systems are sized to allow the operator to continuously power high flow work tools in conditions that cause competitive machines to overheat.

Selectable Implement Control

The Selectable Implement Control option with three levels of control gives the operator the ability to adjust the responsiveness and speed of the lift and tilt functions for more precise implement control.

Two Speed Option

Two speed option increases top speed up to 14.9 km/h (9.3 mph) allowing you to finish jobs faster.

Rubber Track Undercarriage

Unique undercarriage delivers low ground pressure, superior suspension.

Cat Multi Terrain Loaders feature a rugged, durable rubber track that is lightweight and pliable, yet reinforced with high tensile strength cords. The undercarriage provides low ground pressure, allowing the machine to operate over sensitive surfaces and in soft underfoot conditions. Elevated, internal positive track drive keep drive components away from ground debris. Heavy duty torsion axles suspend each side of the machine frame independently for a smoother ride over rough terrain. Components are replaceable as individual wear items, reducing owning and operating costs. A choice of single or dual level suspension undercarriage is available on all models.

Single Level Suspension Undercarriage

The single level suspension undercarriage distributes the load and greatly reduces shock and vibration throughout the machine for a comfortable ride and excellent bucket load retention.

Dual Level Suspension Undercarriage

The dual level suspension undercarriage uses the same concept as the single level with the addition of oscillating bogie wheels. This provides more track on the ground, better load retention, improved operator comfort, better use of high travel speed and the best ride in the industry.



Power Train

Aggressive performance with fuel efficiency.

Cat Engine

The high performance power train provides high engine horsepower and torque. The C-Series features the Cat C3.4 DIT engine – a rugged, reliable engine that meets U.S. EPA Tier 3 emissions requirements. The 297C is equipped with an Air-to-Air After Cooler (ATAAC) for better fuel efficiency and lower emissions as well as increased horsepower and torque.

Hand and Foot Throttles

Hand and foot throttles allow the operator to match engine speed to the task. The hand throttle is ideal for jobs requiring constant engine speed such as cold planing, trenching or snow blowing. The foot throttle lets the operator vary engine speed and minimize fuel consumption for other tasks such as load and carry, truck loading, grading and dozing.

Electronic Torque Management

The Electronic Torque Management system maximizes power to the ground and prevents the engine from stalling in tough digging and dozing applications for maximum productivity. The system allows part throttle operation which provides smoother machine operation and reduces fuel consumption.

Selectable Work Speed Control

The optional Selectable Work Speed Control lets you select the ground speed that is best suited for the application. This feature is useful in operations such as trenching and cold planing that require precise machine control at relatively slow and constant speeds.

Selectable Hystat Response Control

The optional Selectable Hystat Response Control lets the operator select one of three modes to match the machine's drive response to the operator's preference, skill level and application requirements.



Lift Linkages

Built for tough working conditions.

Choice of Lift Designs

Two types of lifting arrangements are available on the C-Series Multi Terrain Loaders – vertical lift (path #1 above) and radial lift (path #2) – to meet your specific application needs.

Vertical Lift

The 287C and 297C feature the vertical lift design which provides extended reach and lift height for quick and easy truck loading and material placement. The lift height is 3233 mm (127 in) on the 287C and 3279 mm (129 in) on the 297C.

Radial Lift

The 277C, with its radial lift design, delivers excellent digging performance and superior mid-lift reach.



Work Tools

Do more jobs with one machine using Cat Work Tools.

The Right Tool for the Job

Designed and built for optimum performance and durability, Cat Work Tools deliver high productivity in a variety of applications to maximize versatility:

- Augers
- Backhoes
- Blades (angle, dozer)
- Buckets (general purpose, high capacity, dirt, utility, light material, multi purpose, industrial grapple, utility grapple)
- Brooms (angle, pickup, utility)
- Brushcutters
- Cold Planers
- Forks (pallet, industrial grapple, utility grapple, utility)
- Hydraulic Hammers
- Landscape Tillers
- Landscape Rakes
- Material Handling Arm
- Mulcher
- Power Box Rakes
- Shear
- Snow Blowers
- Stump Grinders
- Trenchers
- Vibratory Compactors
- Wheel Saws

Quick Couplers

Work tools can be changed quickly and easily with the Cat Multi Terrain Loader's quick coupler system. The standard quick coupler features manual engagement and disengagement of work tools using two high leverage handles. The optional hydraulic quick coupler allows the operator to quickly change tools without leaving the cab.

AccuGrade™ Grade Control System for Skid Steer, Multi Terrain and Compact Track Loaders

Common to AccuGrade systems for Track-Type Tractors and Motor Graders, this deeply integrated solution automates the machine's electrohydraulic controls to achieve a consistent grade across the work site, improve accuracy and increase productivity, ultimately lowering operating and material costs.



Serviceability

Simplified service and maintenance save you time and money.



Easy Service

Convenient service features make maintenance easy, reducing your downtime:

- Rear door opens 90 degrees for easy access to both sides of the engine.
- Cooling package tilts up to provide excellent access to the engine compartment.
- Cab tilts rearward for easy access to all hydraulic pumps, motors, valves, lines and hydraulic tank.
- Daily maintenance points are easily accessible.
- Wires are color coded and numbered for easy identification.
- S•O•SSM oil sampling valves are standard to allow regular monitoring of the engine and hydraulic oil quality.

Customer Support

Unmatched support makes the difference.

Superior Dealer Service

Your Cat dealer is ready to assist you with your purchase decision and everything after.

- Make detailed comparisons of the machines you are considering before you buy – with estimates of component life, preventative maintenance and the true cost of production.
- Customize the machine that is right for you using the Build and Quote application on your dealer's website or www.cat.com.
- Financing packages are flexible to meet your needs.
- Repair option programs guarantee the cost of repairs up front.
- Nearly all parts are available at the dealer parts counter.
- Operator training can improve your operator's techniques and boost your profits.
- Your Cat dealer can evaluate the cost involved in repairing, rebuilding and replacing your machine so you can make the right choice.



277C, 287C, 297C Multi Terrain Loaders Specifications

Engine

| | | |
|----------------------------|--------------|---------------------|
| Engine Model | Cat C3.4 DIT | |
| Net Power (SAE J1349) | | |
| 277C / 287C | 61 kW | 82 hp |
| 297C | 67 kW | 90 hp |
| Gross Power (SAE J1995) | | |
| 277C / 287C | 63 kW | 84 hp |
| 297C | 70 kW | 94 hp |
| Displacement | 3.3 L | 201 in ³ |
| Stroke | 120 mm | 4.7 in |
| Bore | 94 mm | 3.7 in |

Weights

| | | |
|------------------|---------|-----------|
| Operating Weight | | |
| 277C | 4307 kg | 9,495 lb |
| 287C | 4517 kg | 9,958 lb |
| 297C | 4599 kg | 10,139 lb |

Operating Specifications

| | | |
|---|---------------------|-----------------------|
| Rated Operating Capacity (50% Tipping Load) | | |
| 277C | 1451 kg | 3,200 lb |
| 287C | 1724 kg | 3,800 lb |
| 297C | 1905 kg | 4,200 lb |
| Rated Operating Capacity (35% Tipping Load) | | |
| 277C | 1060 kg | 2,337 lb |
| 287C | 1229 kg | 2,709 lb |
| 297C | 1363 kg | 3,005 lb |
| Rated Operating Capacity w/Optional Counterweight | | |
| 277C | 1620 kg | 3,571 lb |
| 287C | 1868 kg | 4,118 lb |
| 297C | 2069 kg | 4,561 lb |
| Tipping Load | | |
| 277C | 3028 kg | 6,675 lb |
| 287C | 3512 kg | 7,743 lb |
| 297C | 3894 kg | 8,585 lb |
| Breakout Force, Tilt Cylinder | 3315 kg | 7,308 lb |
| Ground Contact Area | 1.64 m ² | 2,542 in ² |
| Ground Pressure | | |
| 277C | 25.5 kPa | 3.7 psi |
| 287C | 26.9 kPa | 3.9 psi |
| 297C | 27.7 kPa | 4.0 psi |

Hydraulic System

| | | |
|--------------------------------|---------------|------------|
| Hydraulic Flow | Standard | |
| Loader Hydraulic Pressure | 23 000 kPa | 3,335 psi |
| Loader Hydraulic Flow | 84 L/min | 22 gal/min |
| Hydraulic Power | 31.9 kW | 42.8 hp |
| Hydraulic Flow | High Flow XPS | |
| Max. Loader Hydraulic Pressure | 28 000 kPa | 4,061 psi |
| Max. Loader Hydraulic Flow | 125 L/min | 33 gal/min |

Cab

| | | |
|---------------|---|--|
| ROPS | SAE J1040 MAY94, ISO 3471:1994 | |
| FOPS | SAE J1043 SEPT87, ISO 3449:1992 Level I | |
| FOPS Level II | SAE J231 JAN81, ISO 3449:1992 Level II | |

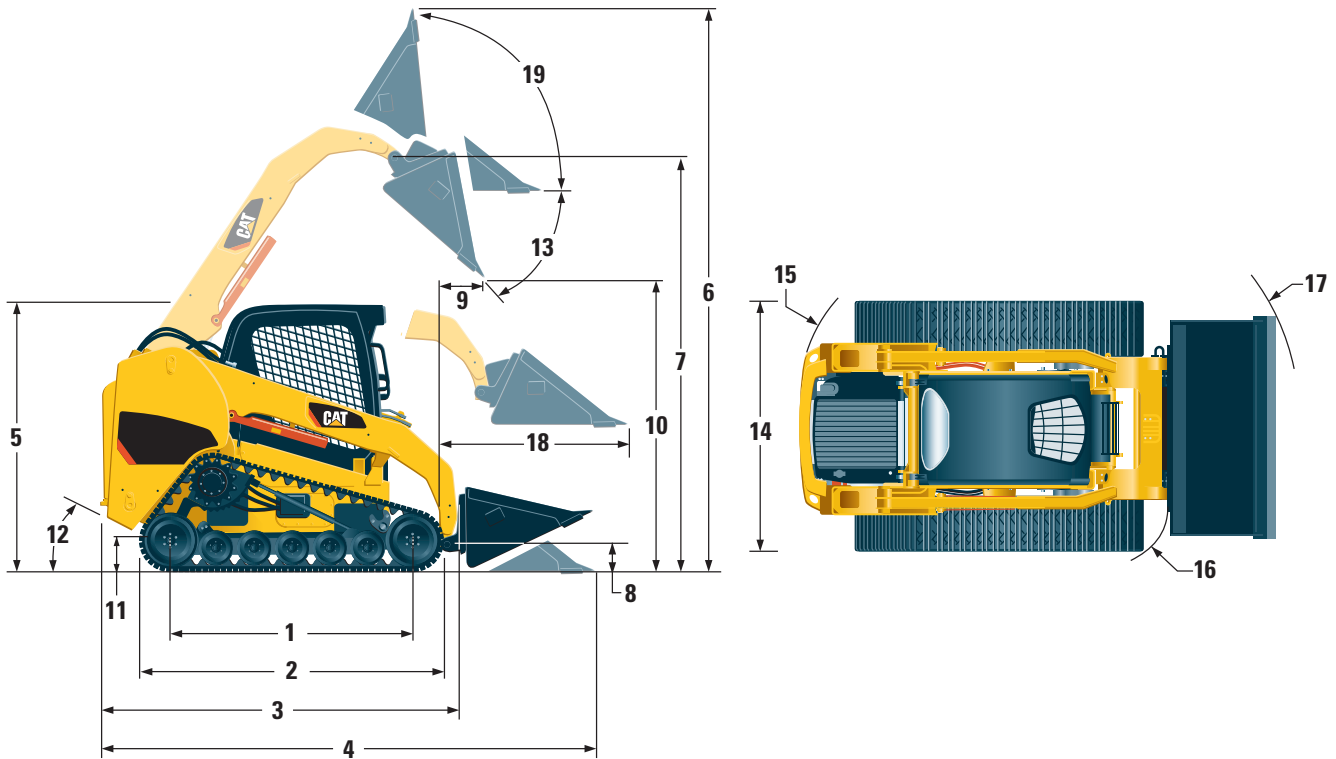
Power Train

| | | |
|---|-----------|---------|
| Travel Speed (Forward or Reverse) | 9 km/h | 5.6 mph |
| Travel Speed – 2-Speed Option (Forward or Reverse) | 14.9 km/h | 9.3 mph |

Service Refill Capacities

| | | |
|------------------|------|---------|
| Cooling System | 14 L | 3.7 gal |
| Engine Crankcase | 10 L | 2.6 gal |
| Fuel Tank | 98 L | 26 gal |
| Hydraulic System | 57 L | 15 gal |
| Hydraulic Tank | 42 L | 11 gal |

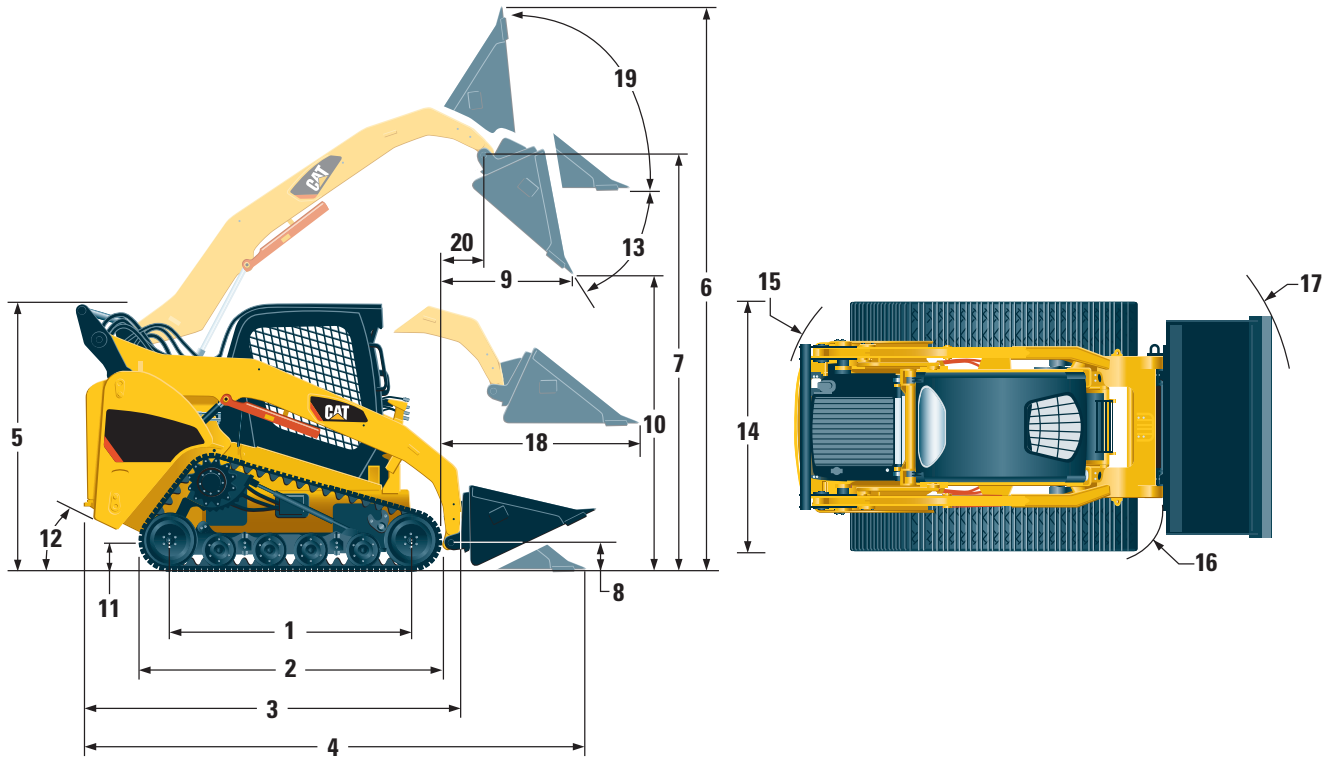
Dimensions



| 277C | | |
|---|---------|----------|
| 1 Length of Track on Ground | 1808 mm | 71.2 in |
| 2 Overall Length of Track | 2286 mm | 90.0 in |
| 3 Length w/o Bucket | 2974 mm | 117.2 in |
| 4 Length w/Bucket on Ground | 3692 mm | 145.4 in |
| 5 Height to Top of Cab | 2115 mm | 83.2 in |
| 6 Max. Overall Height | 3998 mm | 157.4 in |
| 7 Bucket Pin Height at Max. Lift | 3122 mm | 122.9 in |
| 8 Bucket Pin Height at Carry Position | 200 mm | 7.9 in |
| 9 Reach at Max. Lift and Dump | 618 mm | 24.3 in |
| 10 Clearance at Max. Lift and Dump | 2425 mm | 95.5 in |
| 11 Ground Clearance | 225 mm | 8.8 in |
| 12 Departure Angle | 42° | |
| 13 Maximum Dump Angle | 40° | |
| 14 Vehicle Width | 1981 mm | 78.0 in |
| 15 Turning Radius from Center – Machine Rear | 1627 mm | 64.0 in |
| 16 Turning Radius from Center – Coupler | 1487 mm | 58.5 in |
| 17 Turning Radius from Center – Bucket | 2330 mm | 91.7 in |
| 18 Max. Reach w/Arms Parallel to Ground | 1406 mm | 55.4 in |
| 19 Rack Back Angle at Max. Height | 85° | |

277C, 287C, 297C Multi Terrain Loaders Specifications

Dimensions



| | 287C | | 297C | |
|--|---------|----------|---------|----------|
| 1 Length of Track on Ground | 1808 mm | 71.2 in | 1808 mm | 71.2 in |
| 2 Overall Length of Track | 2286 mm | 90.0 in | 2286 mm | 90.0 in |
| 3 Length w/o Bucket | 2973 mm | 117.2 in | 3115 mm | 122.6 in |
| 4 Length w/Bucket on Ground | 3692 mm | 145.4 in | 3833 mm | 150.9 in |
| 5 Height to Top of Cab | 2115 mm | 83.2 in | 2115 mm | 83.3 in |
| 6 Max. Overall Height | 4075 mm | 160.4 in | 4115 mm | 162.0 in |
| 7 Bucket Pin Height at Max. Lift | 3233 mm | 127.3 in | 3279 mm | 129.1 in |
| 8 Bucket Pin Height at Carry Position | 200 mm | 7.8 in | 200 mm | 7.8 in |
| 9 Reach at Max. Lift and Dump | 784 mm | 30.9 in | 767 mm | 30.2 in |
| 10 Clearance at Max. Lift and Dump | 2450 mm | 96.5 in | 2487 mm | 97.9 in |
| 11 Ground Clearance | 225 mm | 8.8 in | 225 mm | 8.8 in |
| 12 Departure Angle | 42° | | 35° | |
| 13 Maximum Dump Angle | 50° | | 51° | |
| 14 Vehicle Width | 1981 mm | 78.0 in | 1981 mm | 78.0 in |
| 15 Turning Radius from Center – Machine Rear | 1627 mm | 64.0 in | 1759 mm | 69.3 in |
| 16 Turning Radius from Center – Coupler | 1487 mm | 58.5 in | 1487 mm | 58.5 in |
| 17 Turning Radius from Center – Bucket | 2330 mm | 91.7 in | 2331 mm | 91.8 in |
| 18 Max. Reach w/Arms Parallel to Ground | 1285 mm | 50.6 in | 1273 mm | 50.1 in |
| 19 Rack Back Angle at Max. Height | 85° | | 83° | |
| 20 Bucket Pin Reach at Max. Lift | 375 mm | 14.7 in | 378 mm | 14.9 in |

277C, 287C, 297C Standard Equipment

Standard equipment may vary. Consult your Cat dealer for details

ELECTRICAL

12 volt Electrical System
90 ampere Alternator
Ignition Key Start/Stop Switch
Lights: Gauge backlighting, two rear tail lights, two rear working lights, two adjustable front halogen lights, dome light.
Backup Alarm
Heavy Duty Battery, 850 CCA

OPERATOR ENVIRONMENT

Gauges: Fuel level, hour meter
Operator Warning System Indicators:
Air filter restriction, alternator output, armrest raised/operator out of seat, engine coolant temperature, engine oil pressure, glow plug activation, hydraulic filter restriction, hydraulic oil temperature, parking brake engaged
Vinyl seat, mechanical suspension
Fold-in Ergonomic Contoured Armrest
Control Interlock System, when operator leaves seat or armrest raised: Hydraulic system disables, hydrostatic transmission disables, parking brake engages
ROPS Cab, Open, Tilt Up
FOPS, Level I
Top and Rear Windows
Headliner, Deluxe
Floor Mat
Interior Rear View Mirror
12 volt Electric Socket
Horn

POWER TRAIN

Cat C3.4 DIT Tier 3 Compliant Diesel Engine
Air Cleaner, Dual Element, Radial Seal
S•O•SSM Sampling Valves, Engine Oil and Hydraulic Oil
Filters, Spin-on, Hydraulic
Filters, Bayonet-type, Fuel and Water Separator
Tilt Up Radiator/Hydraulic Oil Cooler
Spring Applied, Hydraulically Released, Wet Multi Disc Parking Brake
Hydrostatic Transmission

OTHER

Engine Enclosure, Lockable
Extended Life Antifreeze, -37° C (-34° F)
Machine Tie Down Points (4)
Support, Lift Arm
Hydraulic Oil Level Sight Gauge
Radiator Coolant Level Sight Gauge
Radiator, Expansion Bottle
Cat ToughGuardTM Hose
Auxiliary, Hydraulics, Continuous Flow
Heavy Duty, Flat Faced Quick Disconnects
Split D-Ring to Route Work Tool Hoses
Along Side of Left Lift Arm
Electrical Outlet, Beacon
Belly Pan Cleanout

MANDATORY EQUIPMENT

Hydraulics, Standard or High Flow XPS
Quick Coupler, Mechanical or Hydraulic
Seat Belt, 50 mm (2 in) or 75 mm (3 in)

Comfort Package

(must select one of the following):

- Open ROPS (C1): Cup Holder, Radio Ready, Suspension Seat (no heater or door)
- Enclosed ROPS with Heat (C2): Cup Holder, Radio Ready, Seat (choice of Suspension or Air Ride), Heater and Defroster, Side Windows, Door (either Glass or Polycarbonate)
- Enclosed ROPS with A/C (C3): Features of C2 Package plus Air Conditioner

Performance Package

(must select one of the following):

- Performance Package 1: Single Level Suspension Undercarriage, One Speed
- Performance Package 2: Dual Level Suspension Undercarriage, One Speed, Self Level
- Performance Package 3: Dual Level Suspension Undercarriage, Two Speed, Self Level, Advanced Machine Information and Control System (AMICS)

277C, 287C, 297C Optional Equipment

Optional equipment may vary. Consult your Cat dealer for details

Counterweight
Beacon, Rotating
Engine Block Heater – 120V or 240V
Oil, Hydraulic, Cold Operation
Paint, Custom
Work Tool Electrical Control
AM/FM Radio with CD player

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

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