247B/257B

Multi Terrain Loaders





	247	7B	25	7B	
Engine					
Model	Cat® 30	024C T	Cat® 30	024C T	
Net Power	42 kW	57 hp	42 kW	57 hp	
Gross Power	46 kW	62 hp	46 kW	62 hp	
Operating Specifications					
Rated Operating Capacities: 35% Tipping Load	620 kg	1367 lb	732 kg	1615 lb	
Rated Operating Capacities: 50% Tipping Load	885 kg	1950 lb	1047 kg	2310 lb	

247B/257B Multi Terrain Loaders

Designed and built by Caterpillar® to deliver exceptional performance and versatility, ease of operation, serviceability and customer support.

Operator Station

Operator comfort and ease of operation are designed into the operator's station from every aspect, including ergonomic features such as low-effort joystick controls and an adjustable contoured seat. pg. 4

Rubber Track Undercarriage

The unique rubber track undercarriage provides exceptional flotation, traction and stability with minimal pressure on the ground. **pg. 6**

High Performance Power Train

The Cat 3024C Turbo engine provides high engine horsepower and torque, allowing part-throttle operation for lower sound levels and lower fuel consumption. Anti-stall feature maximizes power to the drive train and work tools without stalling the engine. **pg. 7**

Serviceability

The Cat Multi Terrain Loader offers quick and easy routine maintenance and service. The rear door opens 90 degrees and the cooling package tilts up out of the way for the unparalleled access to the engine compartment. The cab also tilts up for easy access. **pg. 11**

Customer Support

Caterpillar dealers offer unmatched customer support, with excellent warranty programs and fast parts availability, resulting in maximum uptime and minimum repair costs. Equipment maintenance services help optimize machine performance and reliability. **pg. 12**

The Caterpillar Multi Terrain Loader, with its many work tool options, is a highly versatile, compact construction machine. It is designed to deliver traditional Cat reliability and productivity in the toughest working conditions.



Advanced Hydraulic System

The hydraulic system in the Cat Multi Terrain Loader is designed for maximum power and reliability. More hydraulic power means better overall performance. Fewer components mean fewer hydraulic connections and reduced chance of leaks. **pg. 8**

257B Vertical Lift Linkage

The vertical lift linkage is an efficient and lightweight design that provides high load carry capacity. **pg. 9**

Quick Coupler and Cat Work Tools

The universal work tool interface and quick coupler helps make the Cat Multi Terrain Loader the most versatile machine on the job site. Add the wide range of performance-matched Cat Work Tools for maximum utility and production. **pg. 10**



Operator Station

World-class operator station provides exceptional working comfort with excellent visibility, enhanced fingertip controls and optimum instrumentation.



Operator Station

Low Effort Machine Controls.

Ergonomic, pilot hydraulic controls give operators precision control of the Cat Multi Terrain Loader with minimal effort. The right joystick controls loader up/down and tilt control and the left joystick controls forward and reverse travel speed plus direction. Both joysticks use an intuitive "S" control pattern. Optional deluxe joysticks now provide more auxiliary controls than before, using positive-action buttons to provide

precision fingertip control of many machine functions, including:

- · Proportional work tool hydraulics
- · Work tool electrical

Basic and Deluxe joystick functions include:

- One-touch continuous auxiliary hydraulic flow
- Momentary auxiliary hydraulic flow

Cab Conveniences. Long hours in the Cat Multi Terrain Loader are made easier by many standard conveniences, including a 12 volt DC power socket. Side, sliding windows offer protection from the elements and allow fresh air ventilation. Redesigned side windows are removable for easy cleaning. Cabs with the door option installed feature a new, automatic lock-out switch that prevents accidental damage by disabling the loader functions when the door is open.

High-Efficiency Climate Controls.

Operating in extreme temperatures can be more comfortable with the optional cab air conditioner and heater installed. Airflow is increased up to 83 percent and is now directed through six adjustable vents. Twice as many vents makes defrosting the optional front door and side windows easier. The heater and air conditioner can be ordered separately or together.

Instrumentation. Cat Multi Terrain Loader instrument panels and gauges are simple, easy to use and reliable. Bright indicator lights and audible warnings signal any critical system situation. Positive feel switches, with status lights, control most on/off functions. An engine air cleaner restriction indicator is now in the cab for easier monitoring.

Visibility. Operating ease and productivity is enhanced on the Cat Multi Terrain Loader with excellent visibility. The wide cab opening offers an exceptional view of the work tool. The sloped angle of the engine compartment allows excellent visibility to the rear of the machine. A new, convex rearview mirror option gives the operator a panoramic view of the machine's rear and sides. In addition, for better visibility in low-light conditions, the standard forward lights are now adjustable 10 degrees in any direction.

Access/Egress. The Cat Multi Terrain Loader cab is designed to make machine operation simple, productive and comfortable. Getting in and out of the cab is easy through a wide opening with three point grab irons and skid-resistant steps. Tilt cylinders are neatly located under the lift arms so not to interfere with operator access and egress. Plenty of uncluttered floor space makes stepping into the cab even easier.

Cab Packages. Several cab packages and options are available. The standard cab offers features such as an adjustable contoured seat, cushioned contoured armbar, dual throttle controls, pilot operated joysticks, 12 volt DC power socket and optional cup holder.



Excellent Visibility

Rubber Track Undercarriage

The unique rubber track undercarriage provides low ground pressure, stability, high traction, fast travel and suspension.



Rubber Track Undercarriage

Rubber Track Undercarriage.

The rubber track undercarriage transfers machine weight to the ground through 24 wheeled contact points. Machine weight is evenly distributed throughout the track.

Large Contact Area. The large ground contact area helps maximize traction and minimize ground pressure.

Positive Track Drive. The elevated, internal positive track drive keeps drive components away from ground debris.

Durable Rubber Track. The rugged, durable rubber track is lightweight and pliable, yet reinforced with high tensile strength cords.

Torsion Axles. Heavy-duty, torsion axles suspend each side of the undercarriage from the machine frame and are shock-absorbing.



High Performance Power Train

Caterpillar hystat power train delivers aggressive performance and easy operation.

Cat Diesel Power. The heart of the Cat Multi Terrain Loader power train is the Caterpillar 3024C Turbo diesel engine. This rugged, reliable, four cylinder engine offers aggressive performance and a fast torque curve for quick response. It is also a low emission engine, fully U.S. EPA Tier 2 compliant.

Dual Engine Throttle Controls. The hand and foot throttles allow the operator to match engine speed to the task. The hand throttle is ideal for jobs requiring consistent 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.

Anti-Stall Feature. The anti-stall system on the Cat Multi Terrain Loader allows maximum power to the tracks while minimizing engine stalling. This system helps maximize productivity for experienced operators and makes it easier for novice operators to become productive.

Closed-Loop, High Output Hydrostatic System. The dual, closed-loop, axial piston hydrostatic pumps are driven directly off the engine. The pumps provide pressure and flow to two fixed displacement motors that power the final drive motors, driving the tracks. No chains are used.



Aggressive Performance

Advanced Hydraulic System

The hydraulic system has built-in reliability and provides exceptional lift, breakout and auxiliary power to work tools.



Powerful and Reliable

Power and Reliability. Maximum power and reliability are built into the Cat Multi Terrain Loader hydraulic system. In addition to providing power to drive the tracks, this system also provides the loader lift and tilt functions, powers the auxiliary circuit to drive work tools and drives the engine cooling fan.

Hydraulic Pumps. The hydraulic pumps are driven off the engine for maximum hydraulic performance and reliability no belts are used. Pumps are fixeddisplacement and provide 60 L/min (15.6 gal/min) at high idle. Maximum system pressure for the loader and auxiliary circuit for the 247B and 257B is 23 000 kPa and 3335 psi. Two fixed displacement gear pumps provide flow and pressure for the 257B high flow loader and auxiliary circuit at 100 L/min (26 gal/min) at high idle. Maximum system pressure for the loader and auxiliary circuit is 23 000 kPa (3335 psi). Control of the loader lift and tilt functions is by hydraulically-operated joystick controls for low effort and precise operation.

Auxiliary Hydraulics. Standard auxiliary hydraulics to power work tools is available through quick connect hydraulic couplings that are rigidly mounted to the loader arm. The Caterpillar line of XTTM ES hoses and O-ring face seals help assure a leak-free system.

Reliability and Cleanliness. Hydraulic system reliability and cleanliness are improved by using single components in place of multiple components, such as the monoblock hydraulic valve and monoblock pumps. Fewer leak points improve reliability and result in a cleaner machine. In addition, hydraulic oil flows through a 5-micron spin-on filter. A filter restriction indicator is located at the operator station. A 74-micron screen in the hydraulic tank prevents larger debris from entering the system and causing damage to the hydraulic components.

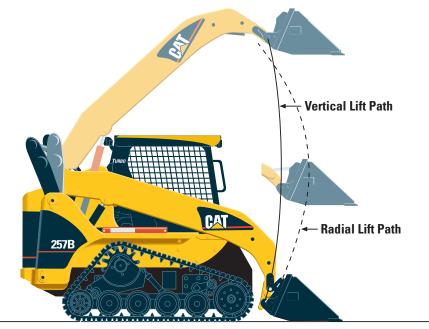
Hydraulic Oil Cooler. A high-efficiency hydraulic oil cooler lets the Cat Multi Terrain Loader work longer and harder in higher ambient temperatures, even when using continuous high flow work tools. The high capacity hydraulic oil reservoir also helps keep operating temperatures lower.

257B Vertical Lift Linkage

Designed and built for operation in the toughest working conditions requiring vertical lifting capabilities.

Lift Arms. The loader lift arms are purposedesigned to provide a substantially straight load path into the machine and a good viewing area to the work tool and sides of the machine. The lift arms are also designed to handle heavy loads without twisting and bending for exceptional reliability.

Spherical Bearing. The spherical bearing distributes the load from the lift arm into the frame by allowing the pin to rotate and pivot within the bore, reducing the chance of developing fatigue cracks in the arms.



Vertical Lift



Quick Coupler and Cat Work Tools

Choose from a wide variety of tools that are performance-matched to the Cat Multi Terrain Loader.



Optional Quick Coupler

Quick Coupler. Work tools can be changed quickly and easily with the Cat Multi Terrain Loader's quick coupler system. The universal coupler interface features:

- Low profile side plate designed for optimum match to work tools and minimal material packing
- Opposing wedges ensure a tight tool fit, even after years of use
- Rugged design and large contact area absorbs loads and minimizes stress
- Vertical pins are chrome plated and lubricated for smooth engagement and prevention of corrosion
- Coupler allows excellent visibility to work tools and unobstructed entry and exit to the cab

The standard quick coupler features manual engagement and disengagement of work tools using two high leverage handles.

An optional hydraulic quick coupler is also available and allows engagement and disengagement of work tools without the operator needing to exit the machine. Control of the coupler by use of a rocker switch inside the cab makes work tool changes quicker and easier.



Cat SG16 Stump Grinder

Cat Work Tools. Cat Work Tools extend the versatility of the Cat Multi Terrain Loader. Designed and built for optimum performance and durability, these tools deliver high productivity, long service life and excellent value:

- · Angle Blades
- Augers
- Backhoes

- Brooms
- Buckets
 - Dirt
 - General purpose
 - Grapple
 - Light material
 - Multi purpose
 - Utility
- Cold planers
- · Compactor, vibratory
- · Hammers
- Landscape rakes
- Landscape tillers
- Material handling arm
- Pallet forks
- Snowblower
- Stump grinder
- Trenchers
- Wheel saw

Serviceability

Quick access and superior design makes the Cat Multi Terrain Loader easy to service and maintain.

Service Access. The rear door opens 90 degrees for easy access to both sides of the in-line (lengthwise) mounted engine.

Filters. All filters are easily accessible, which makes routine service quicker and virtually spill-free.

Cooling System. The radiator, hydraulic oil cooler and grill tilt up to increase access to the cooling system during maintenance and allow easier cleaning of debris from between the grill and cooling packages. The cooling fan is hydraulically-driven for quieter operation and to eliminate the service and maintenance that comes with belt driven fans.

Easy Tilting Cab. The machine cab can now be tilted rearward by an individual using a single tool. The cab is held in place by a self latching mechanism. When the cab is tilted back, all hydraulic pumps, motor, valves, lines and fuel tank are accessible for quicker, easier service.

Removable Belly Pan. A removable belly pan section in the floor of the machine's lower frame provides excellent access for periodic cleaning.

Electrical and Hydraulic Lines.

Cleaner routing of electrical and hydraulic lines compared to former models improves reliability and simplifies service.

Maintenance Points. Maintenance points are grouped in easily accessible locations.

Caterpillar Scheduled Oil Sampling (S•O•SSM). The scheduled oil sampling valves are standard to allow regular monitoring of the engine and hydraulic oil quality.



Tilting Cab

Other Standard Service Features.

The following help make servicing fast and easy:

- Easy access to battery, air filter and single engine belt
- Sight glasses on hydraulic tank and radiator allow quick, easy level checks
- Air filter restriction indicator now located inside the operator station
- Ecology drains simplify changing engine and hydraulic oil

- Grease fittings are countersunk to prevent damage
- Extended life coolant and 250-hour engine oil change intervals

Customer Support

Cat dealer services help you operate longer with lower costs.



Worldwide Parts Availability

Machine Selection. With five different Cat Multi Terrain Loaders to choose from, selecting the right machine is easy when you consult your Caterpillar dealer. Your dealer helps you make detailed machine comparisons before you purchase.

You can also build the machine that is right for you. Go on-line anytime to review the full range of features and options available using the Build and Quote application on your Cat dealer's website or www.cat.com.

Purchase Options. Purchase options let you look beyond the initial machine price. With your Cat dealer, you can review available financing options plus look at day-to-day operating costs. You can also look at dealer services that can be included in the cost of the machine to yield lower equipment owning and operating costs over the life of the machine.

Customer Support Agreements.

Customer Support Agreements offer you a variety of service and maintenance options that can be customized to best fit your specific needs. These can cover the entire machine and included work tools to help protect your investment.

Machine Support. Machine support is one of your Cat dealer's primary goals. Nearly all parts are available at your Cat dealer. If not, your dealer can use the Caterpillar worldwide computer network to locate the closest in-stock parts to minimize machine downtime. Your Cat dealer can also save you money by suggesting Cat Remanufactured parts that carry the same warranty as new but with savings of 40 to 70 percent.

Service Plans. Maintenance Service Plans help you manage machine maintenance. Choose from a wide range of maintenance plans and services at the time you purchase a machine. Repair option plans guarantee the cost of repairs up front. Diagnostics programs such as Scheduled Oil Sampling, Coolant Sampling and Technical Analysis help you avoid downtime and unscheduled repairs.

Training. Operator training by Cat dealers can improve your operator's techniques and help boost your profits. Your Cat dealer also has training video tapes, literature, application and equipment training courses, plus other ideas to help you maximize your machine investment.

Security Systems. Cat machine security systems help you manage your Cat Multi Terrain Loader. This dealer-installed option provides control of machine access by untrained operators or unauthorized personnel. Use up to 50 unique key ID's to customize machine access to fit your needs. You can program this system to allow access only during certain hours or days.

Repair, Rebuild or Replace. The repair, rebuild or replace choices become even more evident when you consult your Caterpillar dealer. Your Cat dealer can help evaluate the costs involved so you can make the right decision every time.

Model		
- 247B/257B	Cat 3024C	T
Gross Power SAE J1995		
- 247B/257B	46 kW	62 hp
Engine Power ISO 14396		
- 247B/257B	46 kW	62 hp
Net Power 80/1269/EEC		
- 247B/257B	43 kW	57 hp
Net Power ISO 9249		
- 247B/257B	43 kW	57 hp
Net Power SAE 1349		
- 247B/257B	42 kW	57 hp
Displacement		
- 247B/257B	2.2 L	134 in ³
Bore		
- 247B/257B	84 mm	3.3 in
Stroke		
- 247B/257B	100 mm	3.9 in
Weights		
Operating Weight		
- 247B	3024 kg	6668 lb
- 257B	3428 kg	7559 lb
Operating Weight (HF)		

3470 kg

7651 lb

- 257B

Rated Operating Capacities:		
35% Tipping Load		
- 247B	620 kg	1367 lb
- 257B	732 kg	1615 lb
Rated Operating Capacities:		
50% Tipping Load		
- 247B	885 kg	1950 lb
- 257B	1047 kg	2310 lb
Rated Operating Capacity 35% (HF)		
- 257B	738 kg	1627 lb
Rated Operating Capacity 50% (HF)		
- 257B	1054 kg	2324 lb
Ground contact area		
- 247B/257B	1.14 m ²	1770 in
Ground Pressure		
- 247B	26 kPa	3.8 psi
- 257B	30 kPa	4.3 psi
Tipping Load		
- 247B	1772 kg	3907 lb
- 257B	2096 kg	4622 lb
Tipping Load (HF)		
- 257B	2108 kg	4648 lb
Breakout Force, Tilt Cylinder		
- 247B	1694 kg	3734 lb
- 257B	1693 kg	3732 lb
Breakout Force, Lift Cylinder		
- 247B	1418 kg	3127 lb
- 257B	1670 kg	3683 lb
Breakout Force, Lift Cylinder (HF)		
- 257B	1658 kg	3656 lb

Dimensions shown are based on standard machine equipped with 1676 mm (66 in) Dirt Bucket. The specifications for the Cat 247B/257B are static and conform to SAE J732 JUN 92, SAE J818 MAY87 and ISO 5998:1986.

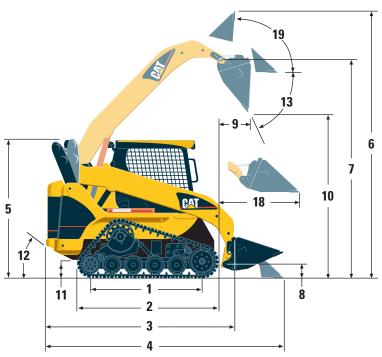
Hydraulic System		
Hydraulic Flow		
- 247B/257B	Standard flo	w
Hydraulic Flow		
- 257B	High flow	
Loader Hydraulic Pressure		
- 247B/257B	23 000 kPa	3335 psi
Loader Hydraulic Flow		
- 247B/257B	60 L/min	15.6 gal/min
Loader Hydraulic Flow (HF)		
- 257B	100 L/min	26 gal/min
Hydraulic Power		
- 247B/257B	22.7 kW	30.4 hp
Hydraulic Power (HF)		
- 257B	37.7 kW	50.6 hp
Cab		
ROPS		
- 247B/257B	SAE J1040 MAY94, ISO 3471:1994	
FOPS		
- 247B/257B	SAEJ/ISO 3449 APR98 Level I, ISO 3449:1992 Level I	
FOPS Level II		
- 247B/257B	SAEJ/ISO 3449 APR 98 Level II, ISO 3449:1992 Level II (optional)	

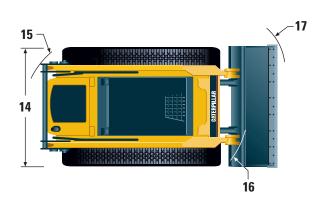
Travel Speed — Forward		
- 247B	12.2 kph	7.6 mph
- 257B	11.4 kph	7.5 mph
Travel Speed — Reverse		
- 247B	12.2 kph	7.6 mph
- 257B	11.4 kph	7.5 mph

Service Refill Capacities				
Cooling System				
- 247B/257B	10 L	2.6 gal		
Engine Crankcase				
- 247B	8 L	2.1 gal		
- 257B	7 L	1.8 gal		
Fuel Tank				
- 247B	65 L	17 gal		
- 257B	77 L	20 gal		
Hydraulic System				
- 247B/257B	55 L	14.5 gal		
Hydraulic Tank				
- 247B/257B	35 L	9.2 gal		

Dimensions

All dimensions are approximate.





1	Length of Track on ground		
	- 247B/257B	1499 mm	59 in
2	Overall Length of track		
	- 247B/257B	1899 mm	75 in
3	Length w/o Bucket		
	- 247B	2518 mm	99 in
	- 257B	2701 mm	106 in
4	Length w/Bucket on ground		
	- 247B	3285 mm	129 in
	- 257B	3490 mm	137 in
5	Height to Top of Cab		
	- 247B	1990 mm	78 in
	- 257B	2022 mm	80 in
6	Max Overall Height		
	- 247B	3799 mm	150 in
	- 257B	3963 mm	156 in
7	Hinge Pin Height at max lift		
	- 247B	2862 mm	112 in
	- 257B	3018 mm	119 in
8	Hinge Pin Height at		
	carry position		
	- 247B/257B	234 mm	9.3 in
9	Reach at max lift and dump		
	- 247B	625 mm	25 in
	- 257B	790 mm	31 in
10	Clearance at max lift and dump		
	- 247B	2134 mm	84 in
	- 257B	2278 mm	90 in

11	Ground Clearance		
	- 247B	267 mm	10 in
	- 257B	257 mm	10 in
12	Departure Angle		
	- 247B	41°	
	- 257B	37°	
13	Maximum Dump Angle		
	- 247B	40°	
	- 257B	50°	
14	Vehicle Width		
	- 247B/257B	1676 mm	66 in
15	Turning Radius from		
	center — left		
	- 247B	1356 mm	53.4 in
	- 257B	1479 mm	58.2 in
16	Turning Radius from		
	center — right		
	- 247B	1318 mm	51.9 in
	- 257B	1696 mm	66.8 in
17	Turning Radius from		
	center — full		
	- 247B	2157 mm	84.9 in
	- 257B	1545 mm	60.8 in
18	Max Reach w/Arms Parallel		
	to ground		
	- 247B	1395 mm	54.9 in
	- 257B	1388 mm	54.6 in
19	Rack Back Angle at max height		
	- 247B	96.7°	
	- 257B	86.9°	

Standard Equipment

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

CONTROLS

Pilot Operated Implement Control, RH

Pilot Operated Hydrostatic Transmission Control, LH

Hand and Foot Throttle

ELECTRICAL

12 volt Electrical System

85 ampere Alternator

Ignition Key Start/Stop Switch

Lights:

Gauge Backlighting

Two Rear Tail Lights

Two Adjustable Front Halogen Lights

Dome Light

OPERATION 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

Park Brake Engaged

Adjustable Vinyl Seat

Pull Down 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

Interior Rear View Mirror

12 volt Electric Socket

POWER TRAIN

Caterpillar 3024C T Diesel Engine

Drain, Engine Oil Ecology

Fuel Priming Pump

Glow Plugs Starting Aid

Liquid Cooled, Direct Injection

Air Cleaner, Dual Element, Radial Seal

S•O•SSM Sampling Valves, Engine Oil and Hydraulic Oil

Filter, Spin on, Hydraulic

Filter, Bayonet-Type, Fuel and Water Separator

Tilt Up Radiator/Hydraulic Oil Cooler

Muffler, Standard

Spring Applied, Hydraulically Released,

Wet Multi Disc Parking Brakes

Hydrostatic Transmission

Rubber Track Drive (381 mm [15 in] wide)

OTHER STANDARD EQUIPMENT

Engine Enclosure — Lockable

Extended Life Antifreeze –36° C (–33° F)

Machine Tie Down Points (4)

Coupler, Mechanical

Support, Lift Arm

Hydraulic Oil Level Sight Gauge

Radiator Coolant Level Sight Gauge

Radiator Expansion Bottle

XTTM Hose

Auxiliary, Hydraulics, Continuous Flow

Heavy Duty, Flat Faced Quick Disconnects

Split D-Ring to route Work Tool hoses along

side left lift arm

Electrical Outlet, Beacon

Belly Pan Cleanout

Optional Equipment

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

Alarm, Backup

Battery, Heavy Duty, 880 CCA

Belt, Seat, 75 mm (3 in), for Static Seat

Belt, Seat, 75 mm (3 in), for Suspension Seat

Control Groups:

Horn

Work Tool Electrical (C1/C2 Switch)

Proportional

Debris Barrier

Door, Front, Safety Glass with Wiper-Washer

Door, Front, Polycarbonate with Wiper-Washer

(for Demolition use)

Floormat, Deluxe

FOPS, Level II (Attaches to existing FOPS)

Headliner

Heater and Defroster

Air Conditioning, Heater, Defrost

Engine, Coolant Heater

High Flow Hydraulics (257B only)

Hydraulics, Auxiliary, Front, Proportional

Hydraulics, Self-Leveling

Hydraulic Quick Coupler

Lifting Eye, Single Point

Lifting Eyes, Four Point

Lights, Warning Beacon (with Switch)

Lights, Rear Working

Oil, Hydraulic, Cold Climate

Seat, Suspension

Window, Side, Sliding

Notes			

247B/257B Multi Terrain Loaders

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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AEHQ5567 (12-03) Replaces 247 AEHQ5446, 257 AEHQ5447 Materials and specifications are subject to change without notice.

Featured machines in photos may include additional equipment.

See your Caterpillar dealer for available options.

