

# 325D FM

## Forest Machine



### Engine

Engine Model	Cat® C7 ACERT™	
Net Flywheel Power	152 kW	204 hp

### Weights

General Forestry (HW)	36 952 kg	81,466 lb
Log Loader (U/U)	41 430 kg	91,338 lb
Log Loader (O/U)	41 834 kg	92,229 lb

- Operating weight with front linkage, without bucket or grapple.

# 325D FM Forest Machine

*The D Series incorporates innovations for improved performance, rugged durability and maximum productivity.*

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## Power Train

The Cat® C7 with ACERT™ Technology gives the 325D FM exceptional power and fuel efficiency unmatched in the industry. The C7 meets U.S. EPA emissions requirements. **pg. 4**

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## Versatility

Designed and purpose-built to meet diverse forestry applications, the 325D FM can help improve productivity in various forestry and millyard applications. **pg. 11**

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## Customer Focus

Down time is minimized by the utilization of a worldwide computer network that can help find in-stock parts and minimize your down time. Your Cat dealer can also offer a wide range of other services that can be set up to meet your equipment needs. The dealer will help choose the plan that can cover everything from machine and attachment selection to replacement. **pg. 15**

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## Hydraulics

Forest Machine hydraulic systems are designed to provide reliability, outstanding controllability and proven performance in various forestry applications. **pg. 5**

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## Cat® Grapples

Cat® Log Loading Grapples combined with Cat Forest Machines make the 325D FM flexible, versatile and efficient, allowing you to maximize productivity on your forestry job. **pg. 12**

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## Operator Comfort

Spacious purpose built forestry cab with excellent sightlines to the work area with 8 lights and all scratch resistant polycarbonate windows. Certified FOPS to ISO 8084 and SAE 1084, certified OPS to ISO 8083 and SAE J231, certified FOGS to SAE J1356, certified ROPS to ISO 3471:1997 Table 1, Section 1, certified TOPS to OR-OSHA code 437-007-0775 TOPS and WCBG602/G603/G604/G608 compliant. **pg. 6**



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### Structures

Purpose-built carbody design uses the most advanced manufacturing processes, ensuring durability and reliability in the most rugged forestry applications. **pg. 8**

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### Guarding

Factory forestry cab guarding, shoe support guards and heavy-duty access doors help extend component life, reduces downtime and helps to protect your forestry machine investment. **pg. 9**

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### Undercarriage

Heavy Duty link assemblies provide toughness and durability. The FM track will maximize undercarriage life and minimize operating costs. **pg. 10**

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### Owning and Operating Costs

Proven fuel efficiency combined with easier access and extended service intervals maximize uptime, reduce operating costs and maximize productivity. **pg. 13**

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### Serviceability

The new FM cooling package provides easy access to all radiator cores for faster cleanouts. Regularly scheduled maintenance extends machine service life and lowers overall operating costs. **pg. 14**



## Power Train

*The Cat® C7 has exceptional power and fuel efficiency unmatched in the industry for consistently high performance in both forestry and millyard applications.*



**Cat C7 ACERT™.** The Cat® C7 with ACERT™ Technology gives the 325D FM exceptional power and fuel efficiency unmatched in the industry, and provides high performance in all forestry applications. The C7 meets U.S. EPA emissions requirements.

**Performance.** The 325D FM is equipped with the C7 ACERT engine, which provides 12% more horsepower as compared to the previous 3126B ATAAC HEUI engine.

### **Automatic Engine Speed Control.**

The two-stage, one-touch control maximizes fuel efficiency and reduces sound levels.

### **ADEM™ A4 Engine Controller.**

The ADEM A4 electronic control module manages fuel delivery to get the best performance per liter of fuel used. The engine management system provides flexible fuel mapping, allowing the engine to respond quickly to varying application needs. It tracks engine and machine conditions while keeping the engine operating at peak efficiency.

### **Electronic Control Module.**

The Electronic Control Module (ECM) works as the “brain” of the engine’s control system, responding quickly to operating variables to maximize engine efficiency. Fully integrated with sensors in the engine’s fuel, air, coolant, and exhaust systems, the ECM stores and relays information on conditions such as RPM, fuel consumption, and diagnostic information.

### **Fuel Delivery.**

The Cat C7 ACERT features electronic controls that govern the fuel injection system. Multiple injection fuel delivery involves a high degree of precision. Precisely shaping the combustion cycle lowers combustion chamber temperatures, generating fewer emissions and optimizing fuel combustion. This translates into more work output for your fuel cost.

**Cooling System.** The cooling fan is directly driven from the engine. An optional programmable reversible fan allows for radiator blowout, to increase service intervals and to maintain engine operational temperatures. The optimum fan speed is calculated based on the target engine speed, coolant temperature and hydraulic oil temperature. The Cat C7 ACERT delivered a completely new layout that separates the cooling system from the engine compartment.

**Air Cleaner.** The radial seal air filter features a double-layered filter core for more efficient filtration and is located in a compartment behind the cab. A warning is displayed on the monitor when dust accumulates above a preset level.

### **Noise Reduction Technologies.**

The engine mounts are rubber-isolating mounts matched with the engine package. Further noise reduction has been achieved through design changes to the isolated top cover, oil pan, multiple injection strategy, insulated timing cover, sculpted crankcase and gear train refinements.

# Hydraulics

*Cat® hydraulics provide the power and control needed for a variety of applications.*

**Component Layout.** The 325D FM hydraulic system and component locations have been designed to provide a high level of system efficiency. The main pumps, control valves and hydraulic tank are located close together to allow for shorter tubes and lines between components that reduce friction loss and pressure drops in the lines. The layout further provides greater operator comfort by placing the radiator on the cab side of the upper structure.

This allows incoming air to enter the engine compartment from the operator side and hot air and corresponding engine sound to exit on the opposite side away from the operator. This reduces engine compartment heat and sound being transmitted to the operator.



**Pilot System.** The pilot pump is independent from the main pumps and controls the front linkage, swing and travel valve functions.



**Hydraulic Cross Sensing System.**

The hydraulic cross sensing system improves productivity with faster implement speeds and quicker, stronger pivot turns.

**Boom and Stick Regeneration Circuit.**

Boom and stick regeneration circuit saves energy during boom-down and stick-in operation which increases efficiency, reduces cycle times and pressure loss for higher productivity, lower operating costs and increased fuel efficiency.

**Fine Swing Control.** Standard fine swing control cushions start and stop for better implement control.

**Controllability.** The hydraulic system offers precise control to the 325D FM reducing operator fatigue, improving operator effectiveness and efficiency, which ultimately translates into enhanced performance.

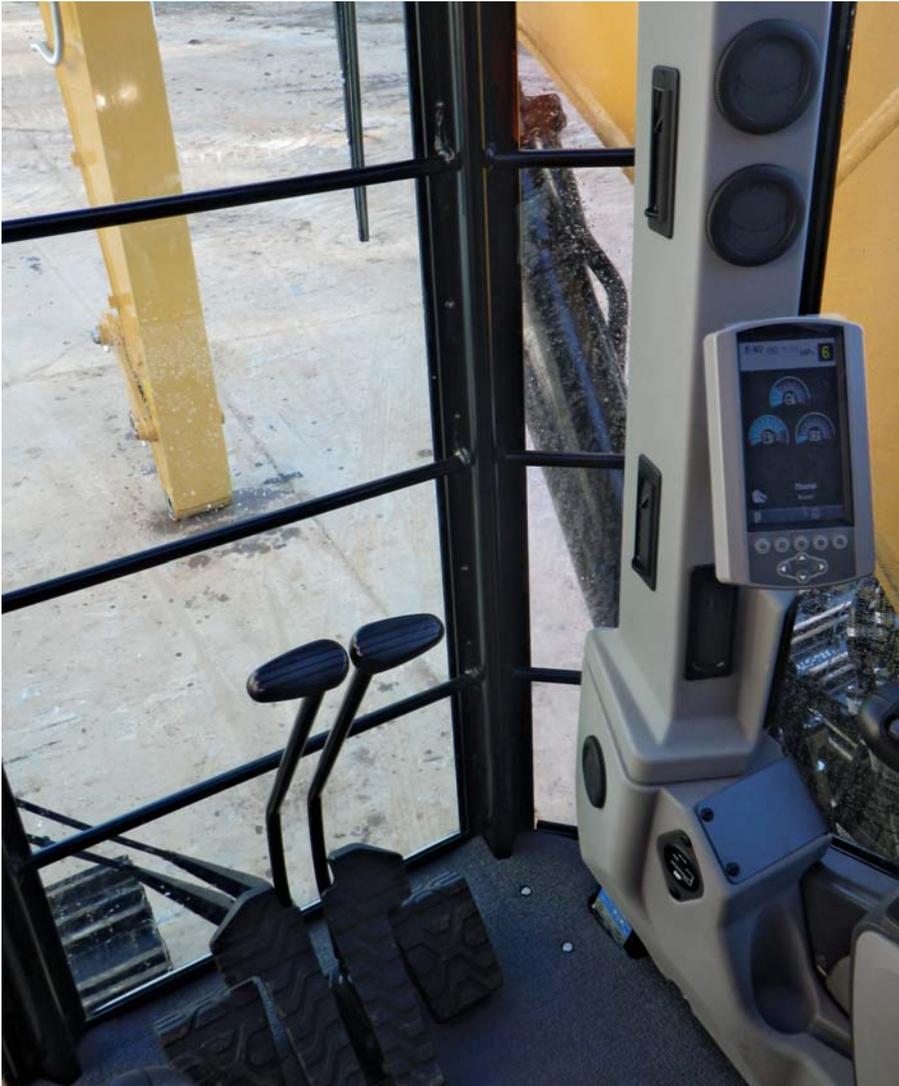
**Auxiliary Hydraulic Valve.** The auxiliary valve is standard on the 325D FM. Control Circuits are available as attachments, allowing for operation of high and medium pressure tools such as grapples.

**Hydraulic Cylinder Snubbers.**

Snubbers are located at the rod-end of the boom cylinders and both ends of the stick cylinders to cushion shocks, reduce sound and increase cylinder life, increasing uptime and productivity.

## Operator Comfort

*The purpose built forestry cab interior layout maximizes operator space, provides exceptional comfort, provides excellent sightlines and reduces operator fatigue.*



**Climate Control.** Positive filtered ventilation, a pressurized cab with bi-level air conditioner, heater and defroster keep operator comfortable in all types of weather conditions. Cab also features a forced air fan and a large fresh air window.

**Monitor.** The monitor is a full color 400 × 234 pixels Liquid Crystal Display (LCD) graphic display. The monitor angle can be adjusted to minimize sun glare and has the capability of displaying information in 27 different languages.



**Operator Station.** The workstation is spacious, quiet and comfortable, assuring high productivity during a long work day. Controls, joysticks and an ergonomically designed seat reduce operator fatigue.

**Pre-Start Check.** Prior to starting the machine, the system will check for low fluid levels for the engine oil, hydraulic oil and engine coolant and warn the operator through the monitor in the event display area.

**Gauge Display.** Three analog gauges, fuel level, hydraulic oil temperature and coolant temperature, are displayed in this area.

**Event Display.** Machine information is displayed in this area with the icon and language.

**Multi-Information Display.** This area is reserved for displaying various information which is convenient for the operator. The “Cat” logo is displayed when no information is available to be displayed.



**Seat.** An air ride seat provides a variety of adjustments to suit the operator's size and weight including fore/aft, height and weight. Wide adjustable armrests and a retractable seat belt are also included.



**Joystick Control.** Joystick controls have low lever effort and are designed to match the operator's natural wrist and arm position. The operator can operate joystick controls with an arm on the armrest and the horizontal and vertical strokes have been designed to reduce operator fatigue. Exclusive proportional control and push buttons are programmable to operator personal preferences, allowing maximum productivity.

**Hydraulic Activation Control Lever.** For added safety, this lever must be in the operate position to activate the machine control functions.



**Console.** Consoles feature a simple, functional design to reduce operator fatigue, ease of switch operation and excellent visibility.



**Skylight.** An enlarged skylight with sunshade provides excellent upwards visibility.



**Viewing.** Cab design optimizes post structures, and scratch-resistant polycarbonate window placement to provide excellent operator visibility to front, sides and rear. Forestry cab is designed with heavy-duty guarding, meeting all ROPS/FOPS/OPS/FOGS/TOPS and CB requirements. Windshield wipers are standard equipment on the FM cab.

## Structures

*Purpose-built forest applications with reinforced carbody, rugged swing bearing, heavy doors and extra guarding.*



### **Rugged main frame design maximizes durability.**

- Outer frame utilizes curved side rails, which are di-formed for excellent uniformity and strength.
- Box-section channels improve upper frame rigidity under the cab.
- Inverted U-channels span the width of the main frame and are formed, rather than fabricated, for superior strength and reduced weight.
- Boom tower and main rails are constructed of solid, high-tensile strength, steel plates.

- Swing drive area is reinforced into the main frame rails supporting high stress loads such as those encountered in shovel logging applications.
- Boom foot and engine mount areas are reinforced for additional strength.
- Sheet metal supporting structure is improved by integrating the mounting into the upper frame structure.

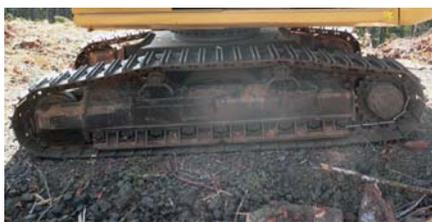
**Carbody Design.** Advanced, reinforced, purpose-built carbody design stands up in the toughest forest applications.

**Carbody Structure.** Wide, tall, and thick carbody structure provides operating stability and durability while improving operation's effectiveness.

- Upper structure weight and stresses are distributed evenly across the full length of the track roller frame.
- Smooth transitions and long welds help reduce stresses at the carbody-to-roller frame junctions for excellent durability.
- Robot welding helps ensure consistent, high-quality welds throughout the manufacturing process.

## Guarding

*Cat guarding protects your forestry machine investment.*



**Shoe Support Guards.** Standard full length track shoe support guards help protect rollers and provide increased rigidity to track links in rough underfoot conditions.

**Stick Cylinder Guard.** Optional HD stick cylinder guard provides protection from trees and debris for hydraulic lines, fittings and cylinder components.

**Factory Forestry Cab.** Caterpillar factory forestry designed and built ROPS/FOPS cab has options for windshield guard and window guards to meet local guarding requirements. The right side and rear windows are made from impact resistant polycarbonate.

**Right Front Corner Guard.** New improved right front corner guard has added tree deflector arm providing increased protection to machine from debris and falling trees or limbs. Arm is rotatable to allow transport position.

**Heavy-Duty Access Doors.** Heavy-duty access doors are standard on the 325D FM and are made from 6 mm (0.24 in), high-strength, low alloy steel. Positive locking latch stays closed in forestry applications. Hinges have larger diameter pins over standard doors. The smooth door profile enhances machine appearance.



## Undercarriage

*Durable undercarriage absorbs stresses and provides excellent stability.*



### 2) Greased Pin and Larger Bushing Combined.

- Extends system life
- Reduces sprocket wear because the system stays matched longer
- Improves balance in component wear life

### 3) Unique Pin Retention System.

- Locks the pin to the link

**Final Drives.** New larger GFT80 final drives provide increased drawbar improving machine agility and increasing productivity.

**Heavy-Duty Top Rollers.** Track rollers with dual supports replace standard single post mounted carrier rollers to assure superior endurance.



**Heavy-Duty Track Rollers.** Nine heavy-duty track rollers per side stand up to the toughest forest applications. Features include greater sealability, higher resistance to deformation and greater load carrying capacity.

### Heavy-Duty Grease Lubricated Track.

The 325D FM undercarriage has been up sized to 345 HD Track Link with 216 mm (8.5 inch) pitch and 9 bottom rollers components as standard equipment. Larger undercarriage components provide extended service life and reduced operating costs.

### 1) Grease Lubricated Track.

- Extends internal bushing wear life
- Reduces noise
- Provides more usable horsepower because of decreased internal friction
- Reduces chance for frozen track joints

## Versatility

*A wide selection of Forest Machine configurations meet diverse forestry applications and improve your productivity.*



**The Cat Log Loader is “Purpose Built” for Forest Applications.** Completely assembled, heel-type log loaders linkage (including grapple) are available from the factory. These are well suited to loading, shovel logging and millyard applications.



**Cat Roadbuilders.** The General Forestry model can be equipped with buckets, thumbs, clamshells and clearing grapples to fit a wide range of forest road building jobs.

**Applications Include.** Moving right-of-way logs, stumping, pioneering, stripping organic material, excavating shot rock, truck loading, back sloping, ditching, finish grading and slash piling.



**Butt-N-Top.** The 325D FM can be shipped from the factory with an optional hydraulic arrangement and controls for AEM Butt-N-Top grapple installation, and an 11.3 m (37 ft) front.



**Less-Off Cab.** A version of the 325D FM Log Loader is available less-off the cab to allow various AEM cabs to be installed by the dealer to meet regional customer needs.

# Cat Grapples

Cat Forest Machines combined with Cat Log Loading Grapples mean optimal performance, reliability and on-the-job productivity.



**Cat 360 Degree Continuous Rotating Log Loader Grapples.** For Forestry Machines are high capacity tools, built for endurance in high-volume logging applications. GLL grapple legs are made of high-strength alloy steel with unique leg profiles for maximum performance in picking/sorting, bunching/loading or shoveling applications. Large bunches of stems or single large logs are easily handled by the wide grapple opening 1524 mm (60 inch) GLL60B, while interlocking legs close down to 127 mm (5 inch) for picking and sorting. Cat grapples have bolt-on access panels allowing for easy serviceability and are backed by the world-class Cat dealer network.

**360-Degree Continuous Rotation.**

High torque hydraulic motor positions the grapple precisely for rapid sorting and loading.

**Hydraulic Cylinders.** Heavy-duty wall construction delivers durability and maximum closing power move the maximum amount of wood per pass.

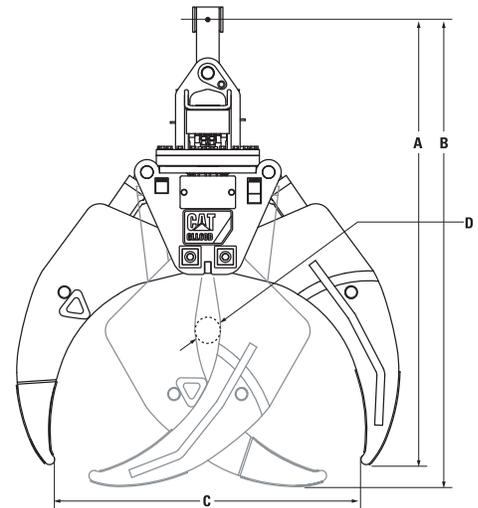
**Legs.** Built with high-strength alloy steel for maximum durability. Optimized profile performs equally well whether sorting, bunching or shoveling.

**Pin.** Induction-hardened alloy pins float, decreasing wear.

**Serviceability.** Bolt-on access panels protect the grapples internal components, while providing easy access. Long service intervals and infield servicing result in more uptime and lower operating costs.

## GLL Specifications/Dimensions

	GLL52B	GLL55B	GLL60B
Weight (kg/lb)	1255/2,767	1291/2,840	1344/2,965
Width (mm/in)	521/20.5	521/20.5	521/20.5
A Height, open (mm/in)	2134/84	2184/86	2261/89
B Height, closed (mm/in)	2159/85	2210/87	2286/90
C Maximum Opening (mm/in)	1321/52	1397/55	1524/60
D Minimum Opening (mm/in)	127/5	127/5	127/5
Rotation, continuous	360°	360°	360°
Rotation torque at 1,200 psi (N·m/ft lb)	1153/850	1153/850	1153/850



## Matching Guide

	GLL52B	GLL55B	GLL60B
320 FM	●	○	
324 FM	●	●	
325 FM	○	●	●
330 FM	○	●	●

- Provides optimum machine match.
- Provides acceptable machine match.

## Owning and Operating Costs

*Cat Forest Machines provide the best value for your forestry and millyard applications.*



### **ACERT™ Technology Fuel Economy.**

Based on Caterpillar testing, the fuel economy of Cat engines with ACERT technology is 3 to 5 percent better than current competing technologies. This fuel economy is directly related to the complete combustion of fuel due to the integration between the electronic control that monitors conditions, the air management system that controls air volume and the fuel injection system that delivers just the right amount of fuel as needed.

### **Radiator Compartment.**

The radial air filter has a double layered filter core for more efficient filtration and is located in a compartment behind the cab. Easy access doors allows for easy, faster cleanout minimizing down time. Heavy-duty screens assembled on the door keep debris away from the radiator compartment, extending service intervals.

## Serviceability

*Simplified service and maintenance features save you time and money.*



**Ground Level Service.** The design and layout of the 325D FM was made with the service technician in mind. Many service locations are easily accessible at ground level allowing critical maintenance to get done quickly and efficiently.

**Air Filter Compartment.** The air filter features a double-element construction for superior cleaning efficiency. When the air cleaner plugs, a warning is displayed on the monitor screen inside the cab.

**Pump Compartment.** A service door on the right side of the upper structure allows ground-level access to the pump and pilot filter.

**Radiator Compartment.** The left rear service door allows easy access to the engine radiator, oil cooler and air-to air aftercooler. A reserve tank and drain cock are attached to the radiator for simplified maintenance.

**Grease Lubricated Track.** Grease lubricated seals protect the track link and deliver long track pin and bushing inner wear life.

**Capsule Filter.** The hydraulic return filter, a capsule filter, is situated outside the hydraulic tank. This filter prevents contaminants from entering the system when hydraulic oil is changed and keeps the operation clean.

**Fan Guard.** Engine radiator fan is completely enclosed by fine wire mesh, reducing the risk of an accident.

**Anti-Skid Plate.** New improved anti-skid material increases grip in wet, icy or muddy conditions. Anti-skid plate covers top of storage box and upper structure to prevent slipping during maintenance.

## Customer Focus

*Cat dealer services help you operate longer with lower costs.*

**Product Support.** You will find nearly all parts at our dealer parts counter. Cat dealers utilize a worldwide computer network to find in-stock parts to minimize machine down time. Save money with remanufactured components.

**Machine Selection.** Make detailed comparisons of the machines you are considering before you buy. What are the job requirements, machine attachments and operating hours? What production is needed? Your Cat dealer can provide recommendations.

**Customer Support Agreements.**

Cat dealers offer a variety of product support agreements, and work with customers to develop a plan the best meets specific needs. These plans can cover the entire machine, including attachments, to help protect the customer's investment.



**Operation.** Improving operating techniques can boost your profits. Your Cat dealer has videotapes, literature and other ideas to help you increase productivity, and Caterpillar offers certified operator training classes to help maximize the return on your investment.



**Maintenance Services.** Repair option programs guarantee the cost of repairs up front. Diagnostic programs such as Scheduled Oil Sampling, Coolant Sampling and Technical Analysis help you avoid unscheduled repairs. Replacement. Repair, rebuild, or replace? Your Cat dealer can help you evaluate the cost involved so you can make the right choice.

## Engine

Engine Model	Cat® C7 ACERT™	
Net Flywheel Power	152 kW	204 hp
ISO 9249	152 kW	204 hp
J1349	152 kW	204 hp
EEC 80/1269	152 kW	204 hp
Bore	110 mm	4.3 in
Stroke	127 mm	5 in
Displacement	7.2 L	440 in <sup>3</sup>

- The 325D FM meets U.S. EPA emissions requirements.
- Net power advertised is the power available at the flywheel when the engine is equipped with fan, air cleaner, muffler, and alternator.
- No engine derating required below 2300 m (7,500 ft) altitude.

## Weights

General Forestry (HW)	36 952 kg	81,466 lb
Log Loader (U/U)	41 430 kg	91,338 lb
Log Loader (O/U)	41 834 kg	92,229 lb

- Operating weight with front linkage, without bucket or grapple.

## Service Refill Capacities

Fuel Tank	520 L	137.4 gal
Fuel Tank – Optional Auxiliary Right Front	410 L	108.3 gal
Optional Counterweight with Fuel Tank	490 L	129.5 gal
Maximum Fuel with all Optional Tanks	1420 L	375.2 gal
Cooling System	30 L	7.9 gal
Engine Oil	34 L	9 gal
Swing Drive	10 L	2.6 gal
Hydraulic System (including tank)	260 L	68.7 gal
Hydraulic Tank	145 L	38 gal
Final Drive (each)	8 L	2 gal

## Drive

Maximum Drawbar Pull	317 kN	71,264 lb
Maximum Travel Speed	4.8 km/h	3 mph

## Hydraulic System

Main Implement System – Maximum Flow (2x)	235 L/min	62.1 gal/min
Max. pressure – Implements	35 000 kPa	5,075 psi
Max. pressure – Travel	35 000 kPa	5,075 psi
Max. pressure – Swing	27 500 kPa	3,988 psi
Pilot System – Maximum flow	36 L/min	9.5 gal/min
Pilot System – Maximum pressure	4120 kPa	597 psi
Boom Cylinder – Bore	140 mm	5.5 in
Boom Cylinder – Stroke	1407 mm	55.4 in
Stick Cylinder – Bore	150 mm	5.9 in
Stick Cylinder – Stroke	1646 mm	64.8 in

## Log Loader Linkage

Boom Cylinder – Bore	150 mm	5.9 in
Boom Cylinder – Stroke	1400 mm	55.1 in
Stick Cylinder – Bore	180 mm	7.1 in
Stick Cylinder – Stroke	1650 mm	65 in
Under/Under Heel Cylinder – Bore	150 mm	5.9 in
Under/Under Heel Cylinder – Stroke	1155 mm	45.5 in
Over/Under Heel Cylinder – Bore	160 mm	6.3 in
Over/Under Heel Cylinder – Stroke	1465 mm	57.7 in

## Swing Mechanism

Swing Torque – General Forestry	86.3 kN·m	63,664 lb ft
Swing Speed – General Forestry	10 rpm	

## Excavator Linkage

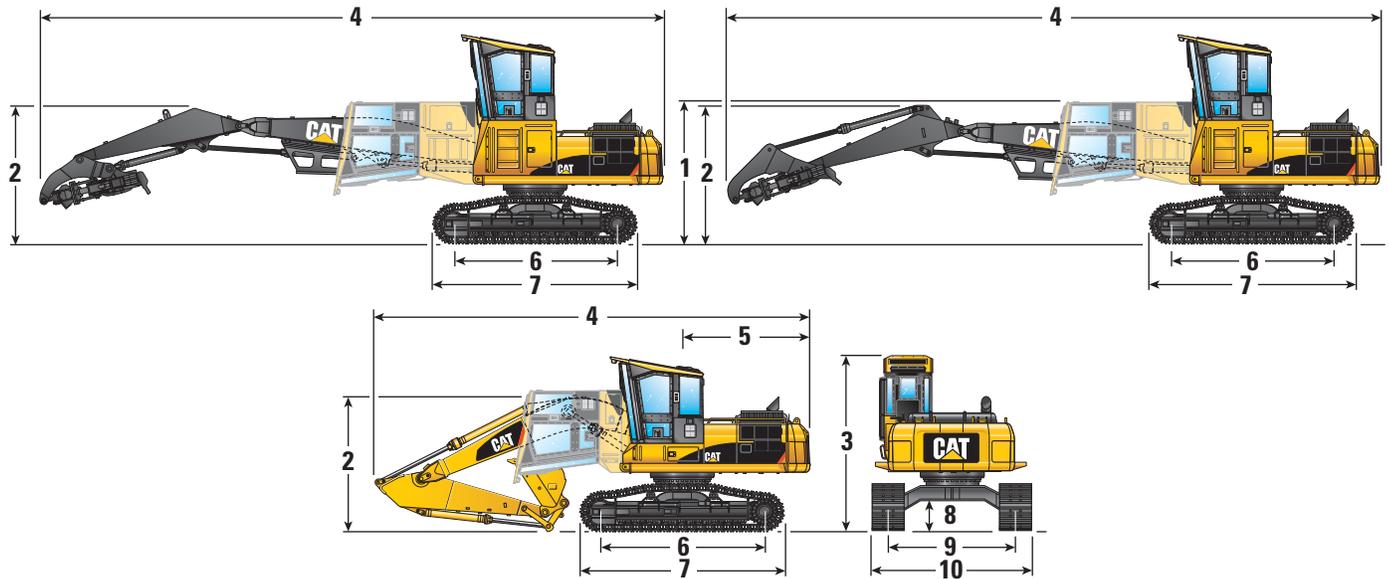
CB2 Family Bucket Cylinder – Bore	135 mm	5.3 in
CB2 Family Bucket Cylinder – Stroke	1156 mm	45.5 in

## Standards

Brakes	SAE J1026 APR90
Cab ROPS/FOGS/OPS/TOPS/FOPS	SAE J1356 FEB88 SAE J1084/ISO 8084/ ROPS: ISO 3471:1997 Table 1, Section 1/ OR-OSHA 437-007-0775/ WCB G602, G603, G604, G608

# Dimensions

All dimensions are approximate.



## 325D FM General Forestry

## HW GF

1	Shipping height. (All risers with cab tilted)	3340 mm (11'0")
2	Boom height	3310 mm (10'10")
3	Overall height	4180 mm (13'9")
4	Shipping length	10 260 mm (33'8")
5	Tail swing radius	3020 mm (9'11")
6	Length to centers of rollers	4020 mm (13'2")
7	Track length	5060 mm (16'7")
8	Ground clearance	760 mm (2'6")
9	Track gauge	2920 mm (9'7")
10	Transport width with 700 mm (27.5") shoes (DG)	3620 mm (11'11")

## 325D FM Log Loaders

## Under/Under

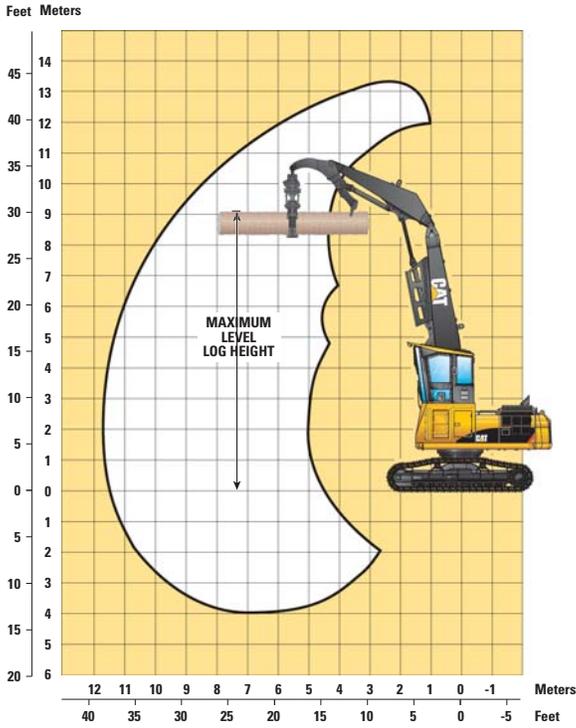
## Over/Under

1	Shipping height. (All risers with cab tilted)	3340 mm (10'10")	3340 mm (10'10")
2	Boom height	2760 mm (9'1")	2740 mm (9'0")
3	Overall height	4950 mm (16'3")	4950 mm (16'3")
4	Shipping length	14 840 mm (48'8")	15 720 mm (51'7")
5	Tail swing radius	3020 mm (9'11")	3020 mm (9'11")
6	Length to centers of rollers	4020 mm (13'2")	4020 mm (13'2")
7	Track length	5060 mm (16'7")	5060 mm (16'7")
8	Ground clearance	760 mm (2'6")	760 mm (2'6")
9	Track gauge	2920 mm (9'7")	2920 mm (9'7")
10	Transport width with 700 mm (27.5") shoes (DG)	3620 mm (11'11")	3620 mm (11'11")

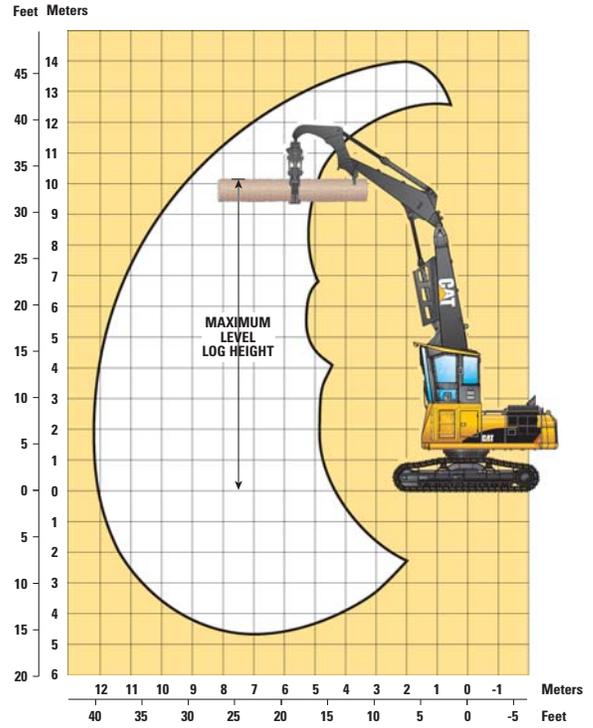
# 325D FM Working Ranges

Log Loader (Under/Under, Over/Under), and General Forestry Reach ranges

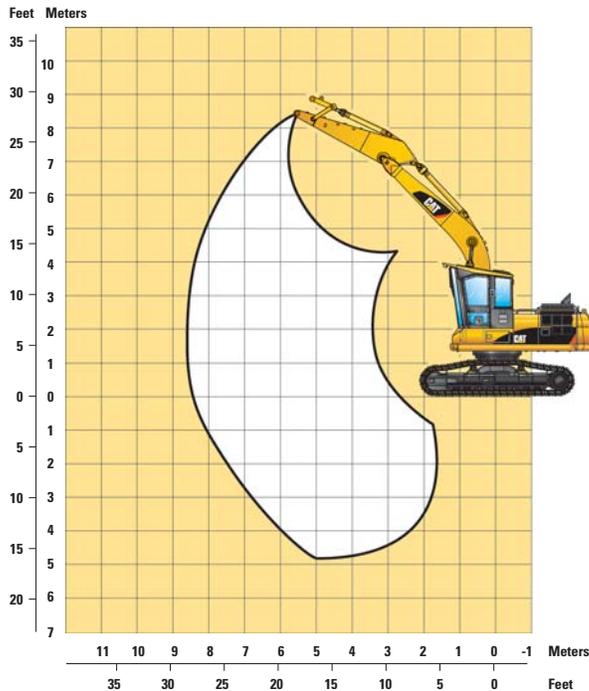
**Heel Boom  
(Under/Under)**



**Heel Boom  
(Over/Under)**



**General Forestry  
HW U/C, 5.9 m (19'4") Boom  
with 2.95S Stick**



# 325D FM LL Heel Boom Under/Under Lift Capacities

**CONFIGURATION** – 12.2 m (40') Boom/Stick/Heel Linkage

**SHOES** – 700 mm (28") Double Grouser

Load Point Height	4.5 m/15.0 ft		6.0 m/20.0 ft		7.5 m/25.0 ft		9.0 m/30.0 ft		10.5 m/35.0 ft		12.0 m/40.0 ft		Load at Maximum Reach		
	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	m ft
10.5 m 35.0 ft	kg lb		*10 550 *23,150	*10 550 *23,150	*9400 *20,650	8450 18,000							*7850 *17,600	6100 13,850	8.86 28.53
9.0 m 30.0 ft	kg lb		*10 300 *22,500	*10 300 *22,500	*9150 *20,000	8550 18,350	*8250 *18,000	6200 13,250					*6950 *15,500	4900 11,000	10.08 32.73
7.5 m 25.0 ft	kg lb		*10 500 *22,850	*10 500 *22,850	*9250 *20,100	8550 18,300	*8200 *17,850	6250 13,350	6650 14,200	4700 9,950			6100 13,550	4250 9,450	10.96 35.75
6.0 m 20.0 ft	kg lb	*9900 *22,250	*9900 *22,250	*11 150 *24,200	*11 150 *24,200	*9550 *20,750	8350 18,000	*8300 *18,050	6150 13,200	6650 14,250	4700 10,000		5550 12,300	3850 8,500	11.57 37.86
4.5 m 15.0 ft	kg lb		*12 100 *26,200	11 600 24,950	*10 000 *21,700	8100 17,400	8500 18,250	6000 12,900	6600 14,150	4650 9,900			5250 11,550	3600 7,950	11.97 39.22
3.0 m 10.0 ft	kg lb		*13 100 *28,300	11 000 23,650	*10 450 *22,650	7750 16,700	8300 17,850	5850 12,500	6500 13,950	4550 9,700	5200 3600		*5050 *11,100	3500 7,500	12.17 39.90
1.5 m 5.0 ft	kg lb		*13 650 *29,500	10 400 22,350	*10 650 *23,050	7450 16,000	8100 17,400	5650 12,100	6400 13,700	4450 9,500	*4950 3550		*4400 *9,700	3500 7,650	12.17 39.94
Ground Line	kg lb		*13 350 *28,950	9950 21,350	*10 350 *22,400	7150 15,400	7950 17,050	5500 11,800	6300 13,550	4350 9,350			*3650 *8,050	3600 7,850	11.99 39.34
-1.5 m -5.0 ft	kg lb	*8250 *19,300	*8250 *19,300	*12 100 *26,200	9650 20,800	*9450 *20,300	7000 15,050	*7350 *15,700	5400 11,600	*5350 *11,150	4300 9,250		*3100 *6,850	*3100 *6,850	11.55 37.84
-3.0 m -10.0 ft	kg lb	*10 800 *25,000	*10 800 *25,000	*9900 *21,250	9600 20,650	*7750 *16,500	6950 14,950	*5750 *12,100	5350 11,550				*3600 *7,900	*3600 *7,900	10.40 33.96

\* Limited by hydraulic capacity rather than tipping load. The above loads are in compliance with hydraulic excavator lift capacity standard ISO 10567. They do not exceed 100% of hydraulic lifting capacity or 100% of tipping capacity. Weight of all lifting accessories must be deducted from the above lifting capacities.

# 325D FM LL Heel Boom Over/Under Lift Capacities

**CONFIGURATION** – 12.8 m (42') Boom/Stick/Heel Linkage

**SHOES** – 700 mm (28") Double Grouser

Load Point Height	3.0 m/10.0 ft		4.5 m/15.0 ft		6.0 m/20.0 ft		7.5 m/25.0 ft		9.0 m/30.0 ft		10.5 m/35.0 ft		12.0 m/40.0 ft		Load at Maximum Reach		
	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	m ft
10.5 m 35.0 ft	kg lb				*9900 *21,750	*9900 *21,750	*8900 *19,600	8750 18,650	*8150 *17,950	6250 13,300					*6800 *15,150	5350 12,100	9.67 31.22
9.0 m 30.0 ft	kg lb				*9700 *21,200	*9700 *21,200	*8750 *19,100	*8750 *19,100	*7950 *17,350	6450 13,700	6750 14,250	4750 10,000			*6100 *13,550	4450 9,900	10.79 35.11
7.5 m 25.0 ft	kg lb				*9900 *21,550	*9900 *21,550	*8850 *19,250	8800 18,850	*7950 *17,300	6450 13,750	6850 14,600	4850 10,300			5600 12,400	3900 8,650	11.62 37.93
6.0 m 20.0 ft	kg lb				*10 550 *22,900	*10 550 *22,900	*9200 *19,950	8600 18,500	*8100 *17,600	6350 13,550	6800 14,550	4800 10,300	5350 3700		5150 11,400	3550 7,850	12.20 39.92
4.5 m 15.0 ft	kg lb				*11 550 *25,000	*11 550 *25,000	*9700 *21,050	8300 17,850	*8350 *18,050	6150 13,200	6700 14,350	4750 10,100	5350 11,400	3700 7,900	4900 10,750	3350 7,400	12.58 41.21
3.0 m 10.0 ft	kg lb				*12 650 *27,350	11 300 24,250	*10 250 *22,150	7950 17,050	8400 18,100	5950 12,750	6600 14,100	4600 9,850	5300 11,300	3650 7,800	*4750 *10,450	3250 7,150	12.76 41.86
1.5 m 5.0 ft	kg lb				*13 450 *29,050	10 600 22,750	*10 550 *22,850	7550 16,250	8200 17,600	5700 12,250	6450 13,800	4500 9,600	5200 11,200	3600 7,700	*4150 *9,150	3250 7,100	12.77 41.90
Ground Line	kg lb				*13 500 *29,200	10 000 21,500	*10 500 *22,550	7200 15,550	7950 17,150	5500 11,850	6300 13,600	4350 9,350	*4900 *10,100	3550 7,600	*3500 *7,650	3300 7,250	12.60 41.33
-1.5 m -5.0 ft	kg lb		*8450 *19,750	*8450 *19,750	*12 650 *27,300	9650 20,750	*9800 *21,150	7000 15,050	*7750 *16,600	5400 11,550	*5950 *12,550	4300 9,250	*3600 *6,350	3550 *6,350	*2850 *6,250	*2850 *6,250	12.21 40.02
-3.0 m -10.0 ft	kg lb	*4800 *10,900	*4800 *10,900	*10 250 *23,700	*10 250 *23,700	*10 800 *23,200	9500 20,400	*8450 *18,050	6900 14,800	*6450 *13,750	5300 11,450	*4500 *9,200	4300 *9,200		*3200 *7,050	*3200 *7,050	11.25 36.75
-4.5 m -15.0 ft	kg lb				*7950 *16,900	*7950 *16,900	*6200 *13,000	*6200 *13,000	*4400 *4400	*4400 *4400					*4150 *9,350	*4150 *9,350	9.18 29.53

\* Limited by hydraulic capacity rather than tipping load. The above loads are in compliance with hydraulic excavator lift capacity standard ISO 10567. They do not exceed 87% of hydraulic lifting capacity or 75% of tipping capacity. Weight of all lifting accessories must be deducted from the above lifting capacities.

Always refer to the appropriate Operation and Maintenance Manual for specific product information.

# 325D FM LL-AEM-Cab Butt-N-Top Lift Capacities

**CONFIGURATION** – 11.3 m (37') Boom/Stick Linkage

**SHOES** – 700 mm (28") Double Grouser

Load Point Height		4.5 m/15.0 ft		6.0 m/20.0 ft		7.5 m/25.0 ft		9.0 m/30.0 ft		10.5 m/35.0 ft		Load at Maximum Reach		
		Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	m ft
10.5 m 35.0 ft	kg lb	*14 400 *31,650	*14 400 *31,650	*12 250 *27,000	*12 250 *26,600	*11 500 8500						*11 050 *24,850	8450 19,300	7.53 24.06
9.0 m 30.0 ft	kg lb	*13 950 *30,500	*13 950 *30,500	*11 900 *26,000	*11 900 *26,000	*10 500 8800						9000 20,250	6500 14,600	8.93 28.94
7.5 m 25.0 ft	kg lb	*14 400 *31,250	*14 400 *31,250	*12,100 *26,300	*12,100 *26,300	*10 500 18,950	8900	9050	6600			7700 17,100	5550 12,350	9.92 32.31
6.0 m 20.0 ft	kg lb	*15 000 *33,550	*15 000 *33,550	*12 700 *27,550	12 200 26,300	*10 750 *23,350	8650	9050	6550	7050	5100	6950 15,350	5000 11,050	10.59 34.64
4.5 m 15.0 ft	kg lb			*13 550 *29,350	11 800 25,350	*11 100 *24,100	8450	8900	6450	7050	5100	6500 14,400	4700 10,350	11.03 36.12
3.0 m 10.0 ft	kg lb			*14 300 *30,900	11 250 24,250	*11 400 *24,650	8150	8750	6300	7000	5050	*6250 *13,800	4550 10,000	11.24 36.86
1.5 m 5.0 ft	kg lb			*14 400 *31,150	10 800 23,250	11 200 24,100	7900	8600	6150	6950	5000	*5500 *12,100	4550 9,950	11.25 36.90
Ground Line	kg lb			*13 550 *29,350	10 500 22,550	*13 000 *23,000	7750	*8400 *18,100	6050 13,050	*6200 *12,850	4950 10,650	*4600 *10,100	*4600 *10,100	11.05 36.25
-1.5 m -5.0 ft	kg lb	*9100 *21,150	*9100 *21,150	*11 650 *25,250	10 350 22,300	*9250 *19,950	7650	*7100 *15,100	6000 13,000			*4300 *9,400	*4300 *9,400	10.47 34.30
-3.0 m -10.0 ft	kg lb			*8800 *18,850	*8800 *18,850	*7000 *14,850	*7000 *14,850					*5200 *11,600	*5200 *11,600	8.78 28.47

\* Limited by hydraulic capacity rather than tipping load. The above loads are in compliance with hydraulic excavator lift capacity standard ISO 10567. They do not exceed 87% of hydraulic lifting capacity or 75% of tipping capacity. Weight of all lifting accessories must be deducted from the above lifting capacities.

# 325D FM GF Reach Boom Lift Capacities

**CONFIGURATION** – 6.15 m (20'2") Boom, 3.2 m (10'6") Stick, Heavy Counterweight

**SHOES** – 700 mm (28") Double Grouser

Load Point Height		1.5 m/5.0 ft		3.0 m/10.0 ft		4.5 m/15.0 ft		6.0 m/20.0 ft		7.5 m/25.0 ft		9.0 m/30.0 ft		Load at Maximum Reach		
		Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	m ft
7.5 m 25.0 ft	kg lb													*5350 *11,850	*5350 *11,850	7.47 24.22
6.0 m 20.0 ft	kg lb									*7550 *16,600	*7550 *16,600			*5150 *11,350	*5150 *11,350	8.35 27.26
4.5 m 15.0 ft	kg lb							*9000 *19,500	*9000 *19,500	*8100 *17,600	*8100 *17,600			*5150 *11,350	*5150 *11,350	8.90 29.12
3.0 m 10.0 ft	kg lb					*13 850 *29,750	*13 850 *29,750	*10 450 *22,550	*10 450 *22,550	*8800 *19,100	8550 18,400	*6500 *11,950	*6500 *11,950	*5350 *11,750	*5350 *11,750	9.60 30.04
1.5 m 5.0 ft	kg lb					*16 150 *34,850	*16 150 *34,850	*11 700 *25,350	11 300 24,300	*9500 *20,650	8350 18,000	*7150 *13,100	6550 *13,100	*5700 *12,500	*5700 *12,500	9.17 30.10
Ground Line	kg lb			*6150 *14,050	*6150 *14,050	*17 100 *37,000	16 650 35,850	*12 500 *27,100	11 050 23,800	*9950 *21,600	8200 17,700			*6300 *13,850	*6300 *13,850	8.93 29.29
-1.5 m -5.0 ft	kg lb	*7550 *16,850	*7550 *16,850	*11 250 *25,400	*11 250 *25,400	*16 900 *36,600	16 600 35,700	*12 650 *27,350	10 950 23,600	*10 000 *21,550	8150 17,600			*7300 *16,150	7050 15,550	8.41 27.56
-3.0 m -10.0 ft	kg lb	*12 650 28,400	*12 650 28,400	*17 750 *40,300	*17 750 *40,300	*15 700 *33,950	*15 700 *33,950	*11 900 *25,700	11 000 23,700	*9050	8200			*8900 *19,650	8150 18,050	7.56 24.69
-4.5 m -15.0 ft	kg lb			*17 600 37,800	*17 600 37,800	*13 050 *27,900	*13 050 *27,900	*9550 *20,050	*9550 *20,050					*8950 *19,650	*8950 *19,650	6.24 20.20

\* Limited by hydraulic capacity rather than tipping load. The above loads are in compliance with hydraulic excavator lift capacity standard ISO 10567. They do not exceed 87% of hydraulic lifting capacity or 75% of tipping capacity. Weight of all lifting accessories must be deducted from the above lifting capacities.

Always refer to the appropriate Operation and Maintenance Manual for specific product information.

# 325D FM GF Mass Boom Lift Capacities

**CONFIGURATION** – 5.55 m (18'3") Boom, 3.2 m (10'6") Stick,  
Standard Counterweight

**SHOES** – 700 mm (28") Double Grouser

Load Point Height		1.5 m/5.0 ft		3.0 m/10.0 ft		4.5 m/15.0 ft		6.0 m/20.0 ft		7.5 m/25.0 ft		Load at Maximum Reach		
		Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	Over Front	Over Side	m ft
7.5 m 25.0 ft	kg lb							*15,300	*15,300			*5350 *11,800	*5350 *11,800	6.68 21.59
6.0 m 20.0 ft	kg lb							*8300 *18,150	*8300 *18,150	*5900	*5900	*5050 *11,150	*5050 *11,150	7.66 24.96
4.5 m 15.0 ft	kg lb							*9250 *20,100	*9250 *20,100	*8100 *17,000	7750 16,600	*5050 *11,100	*5050 *11,100	8.25 26.99
3.0 m 10.0 ft	kg lb			*15 950 *41,750	*15 950 *41,750	*13 500 *29,150	*13 500 *29,150	*10 600 *22,950	10 400 22,450	*9150 *19,950	7550 16,300	*5250 *11,500	*5250 *11,500	8.53 27.98
1.5 m 5.0 ft	kg lb			*7350 *17,250	*7350 *17,250	*16 050 *34,600	15 300 32,900	*11 900 *25,750	10 050 21,700	*9800 *21,250	7400 15,950	*5600 *12,300	*5600 *12,300	8.54 28.04
Ground Line	kg lb			*10 250 *23,250	*10 250 *23,250	*17 250 *37,350	14 900 32,050	*12 700 *27,500	9850 21,200	*10 150 *22,000	7250 15,650	*6300 *13,800	*6300 *13,800	8.28 27.17
-1.5 m -5.0 ft	kg lb	*9800 *21,900	*9800 *21,900	*15 600 *35,300	*15 600 *35,300	*17 100 *37,050	14 750 31,750	*12 700 *27,500	9750 20,550	*9850 *19,300	7250 15,600	*7500 *16,550	7000 15,400	7.72 25.29
-3.0 m -10.0 ft	kg lb	*15 600 *34,950	*15 600 *34,950	*21 900 *47,350	*21 900 *47,350	*15 550 *33,600	14 850 31,950	*11 550 *24,750	9800 21,100			*9700 *21,300	8350 18,500	6.78 22.12
-4.5 m -15.0 ft	kg lb			*16 200	*16 200	*11 650 *24,550	*11 650 *24,550					*9450 *20,700	*9450 *20,700	5.26 16.94

\* Limited by hydraulic capacity rather than tipping load. The above loads are in compliance with hydraulic excavator lift capacity standard ISO 10567. They do not exceed 87% of hydraulic lifting capacity or 75% of tipping capacity. Weight of all lifting accessories must be deducted from the above lifting capacities.

Always refer to the appropriate Operation and Maintenance Manual for specific product information.

## Forestry Grapples

Specification	GLL52B	GLL55B	GLL60B
Part #	271-1533	271-1534	271-1535
For use with	320C FM, 324D FM	324D FM, 325D FM	325D FM, 330D FM
Rotation	Continuous	Continuous	Continuous
Rotation torque	1153 N·m (850 ft-lb)	1153 N·m (850 ft-lb)	1153 N·m (850 ft-lb)
Log volume (tip to tip)	0.41 m <sup>2</sup> (4.5 ft <sup>2</sup> )	0.4 m <sup>2</sup> (4.3 ft <sup>2</sup> )	0.51 m <sup>2</sup> (5.5 ft <sup>2</sup> )
Max. opening	1321 mm (52")	1397 mm (55")	1524 mm (60")
Min. opening	126 mm (5")	126 mm (5")	126 mm (5")
Weight	1255 kg (2,767 lb)	1291 kg (2,840 lb)	1344 kg (2,965 lb)
Width	521 mm (20.5")	521 mm (20.5")	521 mm (20.5")
Height, open	2134 mm (84")	2184 mm (86")	2261 mm (89")

## Standard Equipment

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

### Electrical

- 80 Ampere alternator
- 4 Front working lights, cab top mounted
- 2 Front working lights, riser mounted
- 1 Left side working light, cab mounted
- 1 Rear working light, cab mounted
- Horn

### Operator Environment

- Purpose built forestry cab with 8 lights and all scratch resistant polycarbonate windows
- Seat, Air suspension seat with adjustable armrest, retractable seatbelt, headrest and lumbar support
- Integrated seat, console and joystick type controls
- Language display monitor with gauges
- Warning information
  - Filter/fluid change information
  - Working hour information
  - Machine condition
  - Error code and tool mode setting information
  - Start up level check for hydraulic oil, engine oil and engine coolant
- Full time clock on monitor (2 weeks)
- Seat mounted joystick with extra functions for grapple
- Fixed polycarbonate skylight with retractable sun shade
- Interior lighting
- Lower and upper windshield wipers and washer
- Positive filtered ventilation, pressurized cab with bi-level air conditioner, heater and defroster with manual control
- Forced air fan
- Left side fresh air window with screen
- Behind seat storage tray with tie down points
- 2 CB radio mounts
- 1 Fire extinguisher mount
- 1 Attachment computer control mount
- Secondary roof exit openable from inside and outside
- 2 Coat hooks
- Ashtray with lighter
- Literature holder
- Cup holder
- Neutral lever for all controls
- Travel control pedals with removable hand levers
- Washable floor mat
- Radio/CD player (12V)
- 1 Converter/2 sockets – 12V-10A power supply

### Power Train

- Cat C7 with ACERT™ Technology U.S. EPA emissions compliant with 24-volt electric starting and air intake heater
- Automatic engine speed control with one touch low idle
- Two speed auto-shift travel
- Water separator in fuel line
- Easy clean swing out radiator
- Muffler

### Undercarriage

- Hydraulic track adjusters
- Track type undercarriage with grease lubricated seals
- Idler and full-length track shoe support

### Other Standard Equipment

- Heavy-duty upper frame with catwalks, bottom guards, heavy duty side doors
- Core hydraulic lines and controls with standard main valves on upper structures
- Door locks, cap locks and Cat one key security system
- Automatic swing parking brake
- Travel alarm
- Counterweight with lifting eye
- Right front corner guard

### 325D FM General Forestry Arrangement also includes:

- Forestry cab, hydraulic tilt 0.46 m (18 inch) riser
- High-wide undercarriage
- High drawbar
- Heavy-Duty recoil springs
- Heavy-Duty track roller frame
- Heavy-Duty travel motor covers
- Heavy-Duty swivel grapple/rotator hydraulic arrangement
- Heavy-Duty swivel guard
- Forestry Heavy-Duty upper frame with catwalk
- Heavy-Duty bottom guard
- Heavy-Duty side doors
- Right front corner guard
- Travel alarm and full length shoe support

## Standard Equipment

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

325D FM Log Loader Arrangement also includes:

- Forestry cab
- Hydraulic tilt 1.2 m (48 inch) riser
- High-wide undercarriage
- High drawbar
- Heavy-Duty recoil springs
- Heavy-Duty track roller frame
- Heavy-Duty travel motor covers
- Straight travel third pedal
- Heavy-Duty swivel grapple/rotator hydraulic arrangement
- Heavy-Duty swivel guard
- Forestry Heavy-Duty upper frame with catwalk
- Heavy-Duty bottom guard
- Heavy-Duty side doors
- Right front corner guard
- Travel alarm and full length shoe support

325D FM Log Loader Arrangement for AEM Cab also includes:

- AEM cab platform
- High-wide undercarriage
- High drawbar
- Heavy-Duty recoil springs
- Heavy-Duty track roller frame
- Heavy-Duty travel motor covers
- Heavy-Duty swivel grapple/rotator hydraulic arrangement
- Heavy-Duty swivel guard
- Forestry Heavy-Duty upper frame with catwalk
- Heavy-Duty bottom guard
- Heavy-Duty side doors
- Right front corner guard
- Travel alarm
- Full length shoe support
- Counterweight with removable segments fuel tank

## Optional Equipment

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

Front Linkage: For General Forestry

- Reach Boom 6.2 m (20 ft 2 in)
- Reach Stick 3.2 m (10 ft 6 in)
- Mass Boom 5.5 m (18 ft 2 in)
- Mass Stick 3.2 m (10 ft 6 in)
- Bucket Linkage CB2 Family
- Boom lowering Control Device

Front Linkage: For Log Loader

- Over/Under Boom/Stick/Heel Linkage 12.8 m (42 ft 0 in)
- Under/Under Boom/Stick/Heel Linkage 12.2 m (40 ft 0 in)
- Butt-n-Top Boom/Stick Linkage 11.3 m (37 ft 0 in)
- Stick Cylinder Guard

Hydraulic Arrangements: For General Forestry

- Rotating Grapple
- Butt-n-Top Grapple (also available on Log Loader)
- Thumb

Auxiliary Hydraulic Lines: For General Forestry

- Auxiliary Lines High Pressure (HP) and Medium Pressure (MP), Reach and Mass Boom
- Auxiliary Lines High Pressure (HP) and Medium Pressure (MP) Reach and Mass Stick

Engine/Power Train

- Prefilter, air
- Cold Weather Starting Aid
- Extended Life Cooling with 50% concentration of protection  $-34^{\circ}\text{C}$  ( $-30^{\circ}\text{F}$ )

Undercarriage (Track Shoes)

- 700 mm (28 in) Double Grouser Shoes with Trap Holes
- 850 mm (34 in) Heavy-Duty Triple Grouser Shoes with Trap Holes

Electrical

- Product Link (PL 321 SR)

General Optional Equipment

- Auxiliary Pump Driver (for additional pump)
- Right Front Corner Fuel Tank (additional 409 L – 108 gal)
- Counterweight with Fuel Tank Adds (492 L – 130 gal)
- Heavy Counterweight (additional 2960 kg – 4,620 lb). For General Forestry (Standard on Log Loader). GLL Family Grapples. For Log Loader.

# 325D FM Forest Machine

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AEHQ5916-04 (01-12)

Replaces AEHQ5916-03

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