



325B MH

Material Handler



The Cat® 325B Material Handler is specifically designed for the scrap and material handling customer. This machine uses the most sophisticated manufacturing technology to ensure the highest level of manufacturing quality. This quality, with high Cat design standards, means that the 325B Material Handler will deliver the reliability and productivity you demand from Caterpillar.

Cat Turbocharged 3116

Diesel Engine	132 kW	177 hp
Operating Weight	33 236 kg	73,120 lb
Drawbar Pull	215 kN	48,350 lb
Maximum Travel Speed	4.6 km/h	2.9 mph

Cat Two-Piece Material Handling

Linkage Arrangement	13.4 m	43' 11"
Cat Cab Riser	1.9 m	6' 5"

The Caterpillar® 325B Material Handler

Tough, dependable, and loaded with performance-improving features.



The 325B MH arrangement is available with the following features:

Cat designed and built, 1.9 m (6' 5") cab riser gets your operator to an operating height with excellent visibility for loading or unloading your processing equipment, trucks and rail cars. Access to the cab is provided by a platform which extends around the riser to allow windshield cleaning. The cab riser can also be manually tilted forward 90° for shipping.



15 kW Hydraulically Driven Generator Set can power magnets up to 1477 mm (58 in) in diameter. A Baldor generator and a state-of-the-art electronic magnet controller, manufactured for Cat by Crane system, are linked to provide trouble free service. This new controller virtually eliminates traditional contactor maintenance.

Cat Material Handler hydraulic systems are specifically designed to meet your hydraulic attachment requirements. The grapple open/close circuit works with the other implement circuits to deliver smooth, simultaneous, multi-function control. The rotate circuit provides a separate 30 L/min (8 gpm) gear pump and fully adjustable control valve, which allows this configuration to meet various grapple manufacturer's flow requirements. A separate fixed displacement gear pump is used to provide the hydraulic power to run a 15 kW generator system.



Easy clean-out engine and hydraulic cooling cores are mounted side-by-side for easy clean-out when operating in debris-laden environments.

Special counterweight. The 325B MH is equipped with a counterweight which is 32 percent heavier than the standard counterweight.

Wide 2920 mm (9' 7") track gauge provides the over-the-side stability required to handle heavy loads and improve productivity. Thicker carbody plates, 20 mm (0.8 in) longer higher strength swing bearing bolts (bolt grade increased from 10.9 to 11.9) plus larger box-section height team up to provide superior joint retention and durability in material handling applications.



325B MH two-piece fronts by Caterpillar meet all your application needs with excellent reach, flexibility and lift performance.

The Cat two-piece front offers a maximum horizontal reach of 13.4 m (43' 11") from swing center and a maximum vertical pin height of 14.8 m (48' 7") at 3.9 m (12' 11") from the swing center. The two-piece fronts are an excellent match for a 0.95 m³ (1.25 yd³) scrap grapple.

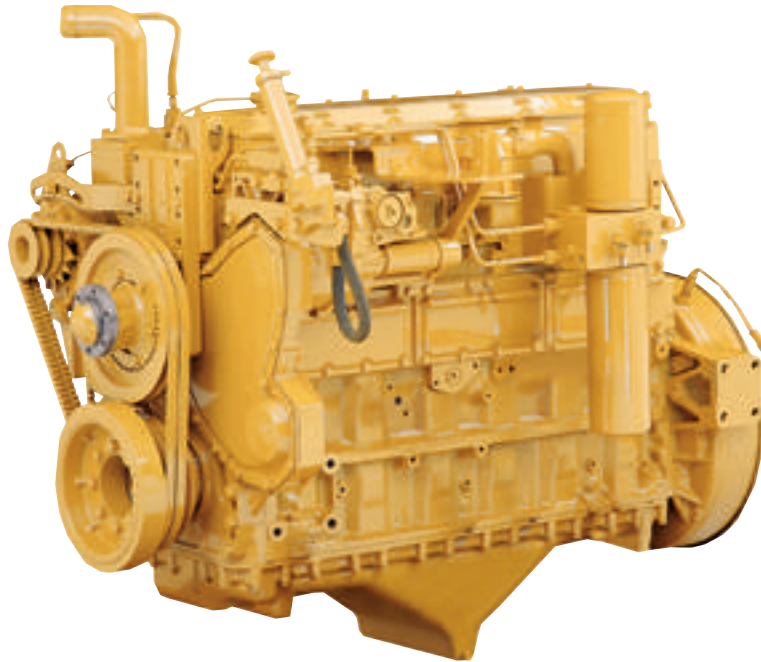
Booms and sticks are built for performance and long service life.

- **Efficient design of welded box-section structures** with thick, multi-plate fabrications in high stress areas allows structures to flex, dissipating stresses and maximizing strength.
- **Stress relieving booms and sticks** maximizes strength and minimizes structure weight.



Cat 3116TA Engine

The six cylinder turbocharged and aftercooled engine is built for power, reliability, economy and low emissions.



Automatic Engine Control with convenient one-touch command. Three-stage control maximizes fuel efficiency and reduces sound levels.

- When placed in the “OFF” mode, if a no-load condition or light-load condition continues more than three seconds, the automatic engine control reduces engine speed by 100 rpm.
- When placed in the “ON” mode, if a no-load condition or light-load condition continues more than three seconds, the automatic engine control reduces engine speed from high idle to 1300 rpm.
- At any time, the operator can activate a switch on the top of the right control lever to reduce the engine speed to 950 rpm. This feature, referred to as one-touch idle, can be used both to conserve fuel and to reduce engine sound levels. Operator can activate switch again to return to previous level.
- Auto Engine Control is deactivated when the generator circuit is active.

High displacement, low rpm rating and conservative hp rating mean longer service hours with less downtime for maintenance and repair.

Turbocharged and aftercooled to increase engine power by burning fuel with greater efficiency.

Two-piece pistons are used for high durability, good fuel efficiency and low vibration. These pistons withstand higher internal cylinder pressure.

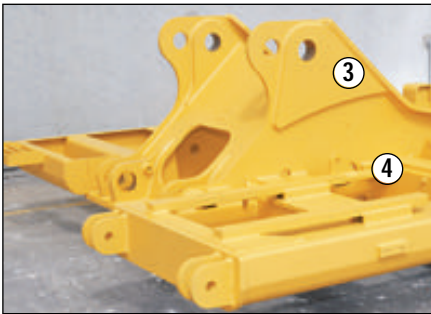
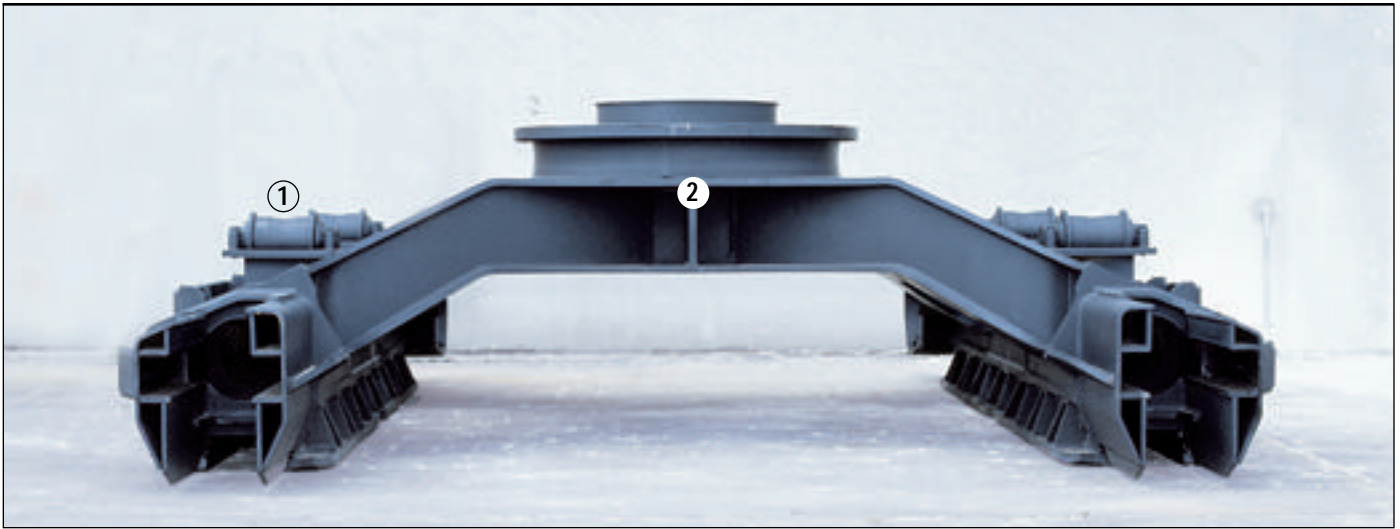
Meets all current and proposed worldwide emissions standards up to the year 2001.

Air intake heating is standard on the 325B for easier cold starts. When coolant temperature is above 10° C (50° F) the air intake heater does not operate. Below that temperature the length of the heating period automatically adjusts to the temperature.

Fuel tank capacity has been increased to allow 15 hours of continuous operation under normal load.

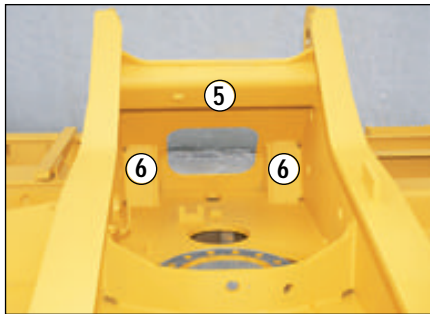
Structures

The 325B MH structural components are the backbone of the machine's durability.



Advanced carbody design (1) stands up in the toughest applications.

- Modified X-shaped, box-section carbody provides excellent resistance to torsional bending.
- Upper structure weight and stresses are distributed evenly across the full length of the track roller frame.
- Smooth transitions and long welds reduce stresses at the carbody-to-roller frame junctions for excellent durability.
- Robotic welding helps ensure consistent, high-quality welds throughout the manufacturing process.

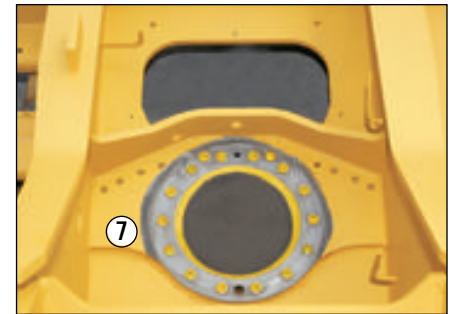


Thicker carbody plates (2) and increased box-section height for increased weight and load capacities.

Robot-welded track roller frames are press-formed, pentagonal units to deliver exceptional strength and service life.

The upper frame is specifically designed for the scrap and material handling market. It is built of higher strength material and thicker steel sections to handle the increased swing loads developed with the longer fronts and heavier counterweights used in material handling.

- Boom tower doubler plates (3) add reinforcement for increased side loads and payloads.
- Box-section reinforcement of the cab outrigger frames (4) support cab risers.



- Box-section cross member (5) and box-section cylinder mounts (6) help handle increased torsional loads and payloads.
- Horizontal mounting plate (7) provides more surface area for swing drive and swing bearing mounting bolts to handle increased loads and movement.
- Outer frame utilizes curved side rails, which are die-formed, for excellent uniformity and strength throughout the length.
- Inverted U-channels span the width of the main frame and are formed, rather than fabricated, for superior strength and reduced weight.
- Boom foot and engine mount areas reinforced for additional strength.
- Sheet metal supporting structure is improved by integrating the mounting into upper frame structure.

Serviceability

Simplified service and maintenance features save you time and money.

Faster, easier maintenance means improved uptime and a better value.

More ground level service points for fuel-water separator, engine oil filter, battery, radiator fluid level, window washer fluid level and pilot system filter.

Improved filters and filter locations makes maintenance easier.

- Hydraulic capsule filter moved to outside hydraulic tank. New design avoids spills and contamination during replacement. Indicator in cab signals when the filter needs to be replaced, extending filter service life.
- Radial seal air cleaner has double layered filter core for better filtration. No tools required to change. Operator is alerted to clogs.

- Engine oil filter moved to pump compartment. Filter opening faces up to avoid spills during changes.
- Pilot hydraulic system filter keeps contaminants away from the pilot system. This system includes a Scheduled Oil Sampling port to simplify sampling.
- Swing and travel motor filter removes contaminants, keeping them from returning to the tank.

Environmentally improved features solve problems and protect the future.

- Optional hydraulic tank shutoff valve reduces hydraulic spills during repair service.

Water separator removes water from fuel even when under pressure and is located in the radiator compartment.

Remote greasing block on the boom and two grease points for the swing bearing deliver grease to hard to reach locations.

Electronic Power Unit Control has diagnostic capabilities for Cat Dealer's use.

- Dealer service technicians can quickly and easily diagnose and adjust machine components, maximizing uptime.

Complete Customer Support

Cat Dealer services help you operate longer with lower costs.

Cat Dealers offer a wide range of services under a customer support agreement when equipment is purchased. The dealer will help choose a plan that can cover everything from machine and attachment selection to replacement for the best return on your investment.

Selection. Make detailed comparisons of the machine being considered before a purchase. How long do components last? What is the cost of preventative maintenance? What is the true cost of lost production? Your Cat Dealer can give precise answers to these questions.

Purchase. Look past initial price. Consider the financing options available as well as day-to-day operating costs. This is also the time to look at dealer services that can be included in the cost of the machine to yield lower equipment owning and operating costs over the long run.

Operation. Improving operating techniques can boost profits. Your Cat Dealer has training videotapes, literature and other ideas to help increase productivity.

Maintenance. Choose from a wide range of maintenance services at the time you purchase a machine. Repair option programs guarantee the cost of repairs up front. Diagnostic programs such as Scheduled Oil 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.

Product support. Cat Dealers utilize a world-wide computer network to find in-stock parts to minimize machine down time. Save money with remanufactured parts. Receive the same warranty and reliability as new products at cost savings of 40 to 70 percent.

Engine

Caterpillar four-stroke-cycle, turbocharged 3116 diesel engine.

Ratings at 2000 rpm*	kW	hp
Gross power	132	177
Net power	125	168

The following ratings apply at 2000 rpm when tested under the specified standard conditions for the specified standard:

Net Power	kW	hp
Caterpillar	125	168
ISO 9249	125	168
EEC 80/1269	125	168

Dimensions

Bore	105 mm	4.13 in
Stroke	127 mm	5.0 in
Displacement	6.6 liters	403 in ³

*Power rating conditions

- based on standard conditions of 25°C (77°F) and 99 kPa (29.32 in Hg) dry barometer
- used 35° API gravity fuel having an LHV of 42 780 kJ/kg (18,390 Btu/lb) when used at 30°C (86°F) [ref. a fuel density of 838.9 g/L (7.001 lb/U.S. gal)]
- net power advertised is the power available at the flywheel when the engine is equipped with fan, air cleaner, muffler and alternator
- no derating required up to 2300 m (7550 ft) altitude

Drive

Fully hydrostatic drive.

- Each track driven by an independent, two-speed, axial-piston hydraulic motor.
- Triple-reduction, planetary final drives.
- Track motors, brakes and final drives are integrated in the track roller frame for maximum protection against damage.

Maximum drawbar pull	215 kN 48,350 lb
Travel Speeds	5.0 km/h 3.1 mph
Gradeability	70%

Hydraulic System

The 325B hydraulic system provides efficient, dependable power when and where it's needed.

Ratings

Maximum flow	2 X 240 L/min	2 X 63 gpm
Maximum pressure:		
Swing	29 400 kPa	4250 psi
Implements	34 300 kPa	4980 psi
Travel	34 300 kPa	4980 psi
Pilot system:		
Maximum flow	41 L/min	10.8 gpm
Maximum pressure	4100 kPa	595 psi
Rotate Circuit for Grapple:		
Maximum flow	30 L/min	8 gpm
Maximum pressure	20 000 kPa	2500 psi
Generator Aux. Pump:		
Maximum flow	174 L/min	46 gpm
Maximum pressure	17 200 kPa	2500 psi

Features

- two, variable-displacement, axial-piston pumps power the boom, sticks, grapple swing and travel circuits
- one, single-section, gear pump powers the generator circuit
- one, single-section, gear-type pump powers the pilot circuit
- one, single-section, gear-type pump powers the rotate circuit
- snubbers are used at the rod ends of the boom cylinders and at both ends of the stick cylinders

Weights*

Operating Weight	33 236 kg 73,120 lb
Upper	9327 kg 20,565 lb
Counterweight	7700 kg 16,940 lb
Undercarriage (includes carbody)	11 442 kg 25,230 lb
Two-Piece Front (with cylinders)	4710 kg 10,385 lb

* All weights shown are for machines equipped with 800 mm (31.5") track and 15 kW generator.

Steering

Two rocker pedals with detachable hand levers control steering and travel functions.

Controls

- controls are pilot-operated for reduced efforts
- left pedal and lever control left track; right pedal and lever control right track
- when idlers are in front, pushing both pedals or levers forward moves the excavator straight ahead
- rocking both pedals or pulling both levers backward moves the excavator straight back
- moving one pedal or lever more than the other, either forward or backward, results in a gradual turn
- moving one pedal or lever forward and the other pedal or lever backward counter-rotates the tracks for spot turns

Brakes

Meets the following standards: SAE J1026 APR90

Service brake features

- two wet, multiple-disc brakes are used on the final drive input shafts
- spring-applied, hydraulically released
- actuating a travel control simultaneously releases the brakes
- when the controls are released, the brakes automatically apply

Parking brake features

- wet, multiple disc brakes
- spring applied, hydraulically released

Swing Mechanism

Hydrostatic with independent planetary reduction.

Ratings

Swing Torque	76 kN·m (56,080 lb·ft)
Swing Speed	10 rpm

Features

- power for the swing mechanism originates with one hydrostatic motor with independent planetary reduction and integral multiple disc brakes
- internal gearing is totally enclosed, and is continuously lubricated together with the pinion

Cab/FOGS

Integral Falling Object Guard System (FOGS) is an attachment in Asia, Australia, and North America.

Cab Certifications

- Integrated Falling Object Guard System is designed to protect the operator from falling objects, and is certified under SAE J1356 FEB88 and ISO 3449-1984 specifications. The front guard is also certified under SAE J1356 FEB88.

NOTE:

When properly installed and maintained, the cab offered by Caterpillar, when tested with doors and windows closed according to ANSI/SAE J1166 MAY90, meets OSHA and MSHA requirements for operator sound exposure limits in effect at time of manufacture.

Track

Caterpillar designed and built track-type undercarriage purpose built for material handlers.

Track shoes	800 mm (31.5")
Ground clearance	686 mm (27")
Gauge	2921 mm (9' 7")
Shoes each side	48
Rollers each side	8
Overall track length	4662 mm (15' 4")

Features

- robot-welded, pentagonal track roller frames with hydraulic adjusters
- sealed and lubricated rollers and idlers
- sealer track with triple grouser shoes

Service Refill Capacities

	L	Gallons
Fuel Tank	420	111
Cooling System	31.5	8.3
Engine Oil	20	5.3
Swing Drive	10	2.6
Final Drive (each)	8	2.1
Hydraulic system (including tank)	310	82
Hydraulic tank	175	46

Standard Equipment

Note: Standard equipment may vary. Consult your Caterpillar Dealer for specifics.

Air conditioner
Alarm, travel
Alternator (52-amp)
Automatic engine control
Automatic swing brake
Boom lowering check valves
Cab, sound suppressed, includes:
 Ash tray
 Cigar lighter
 Coat hook
 Compartments:
 Literature
 Storage, lunch box
 Drink holder
 Floor mat
 Heater with defroster
 Horn, signaling/warning
 Hydraulic/starting systems lock lever
 Instrument panel
 Joysticks, pilot-operated, adjustable
 Lights, interior
 Radio mount
 Seat, adjustable suspension
 Seat belt, retractable
 Skylight, opening
 Travel controls, pedals with
 removable levers
 Windshield wipers and washers
Cab riser, 1.9 m (6' 5")
Catwalks, left and right

Cold weather start
Comprehensive self-diagnostics
Cooling, side-by-side, easy clean
Counterweight, Material Handling
Electronic Memory System
Engine, Cat Turbocharged 3116
Ether starting aid
Fine Swing Control
Generator hydraulics
Grapple hydraulics
Hydraulic system pressure taps
Lights, working:
 Boom, left side (1)
 Cab-mounted (2)
 Frame-mounted (1)
Locks, door and cap, one-key system
Material Handling front, Cat two-piece
Mirrors:
 Cab, left
 Frame, right
Power Mode Selector
Rotate hydraulics
Stick lowering check valves
Straight travel circuit
Track shoes:
 800 mm (31.5") triple grouser
Travel, two-speed
Undercarriage, wide gauge
Ventilation, positive filtered
Windshield, two-piece retractable

Optional Equipment

Note: Optional equipment may vary.
Consult your Caterpillar Dealer for
specifics.

Generator, 15 kW manufactured for
Caterpillar by Crane Systems
Grapples, four tine, by Young
Corporation
Guards, falling object
Rain protector, front window
Track guiding guard

Implement Controls

Two joystick hand levers and switches actuate boom, stick, grapple or generator and swing (ASTM pattern).

Boom/Bucket Controls (Right Joystick)

- move forward and backward to lower and raise boom
- buttons on top, grapple cw and horn
- buttons on front of control lever, close grapple or magnet on

Stick/Swing Controls (Left Joystick)

- move forward and backward to move stick in and out
- move left and right to control direction of swing
- buttons on top controls grapple ccw and horn
- buttons on front of control lever, open grapple or magnet off

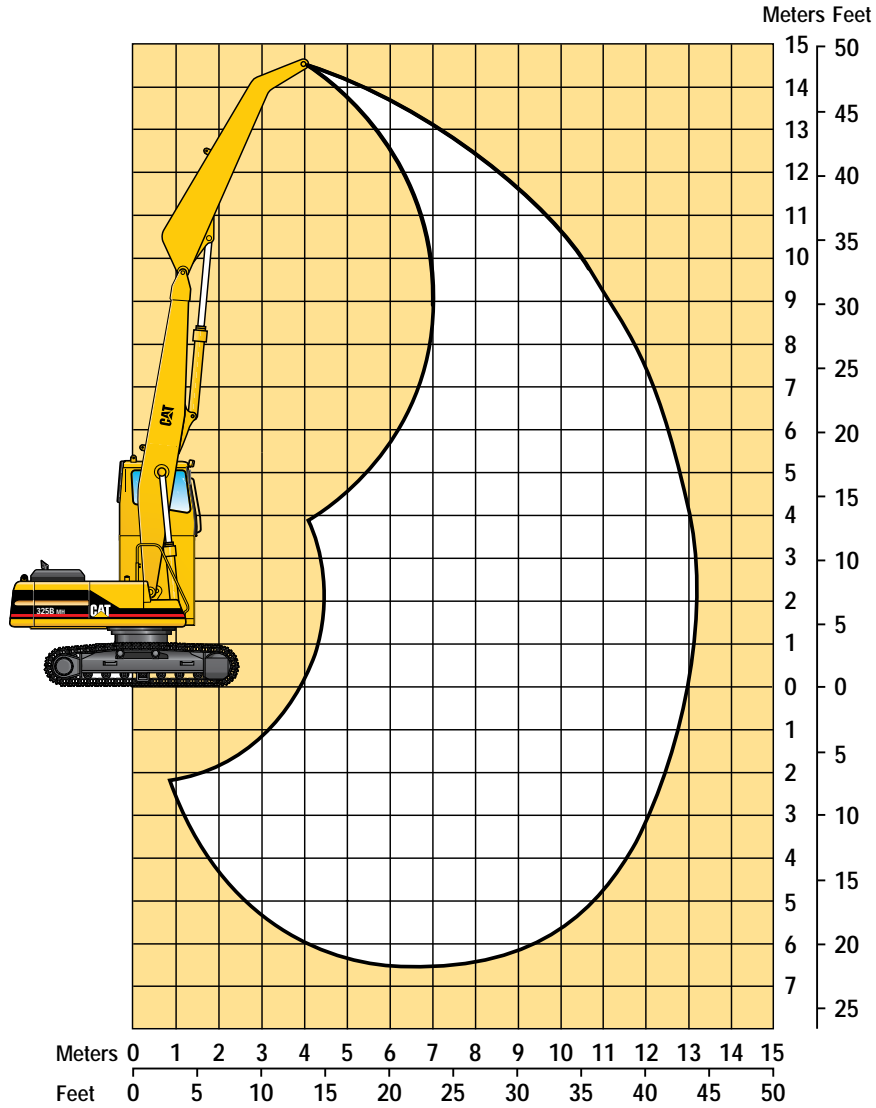
Other Features

- oblique movement of either lever operates two functions simultaneously
- manually applied lever on left console cuts off pilot pressure for joysticks and travel controls and electrical power for engine starting circuit
- toggle switch in cab switches between magnet operation and grapple operation

Working Ranges – Two-Piece Front

Machine equipped with 13.4 m (43' 11") two-piece front. Check with your Cat Dealer for other available options.

Maximum reach at 1.5 m (5')	13.4 m	43' 11"
Maximum height at 3.9 m (12' 11")	14.8 m	48' 7"



325B Material Handler

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Materials and specifications subject to change without notice.

