## WEIGHT CHANGES

| Tires or attachments | Operating weight | | Tipping load straight | | Tipping load full turn | | Width over tires | | Ground clearance | | Change in vertical dimensions | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | kg | lb | kg | lb | kg | lb | mm | ft in | mm | ft in | mm | ft in |
| 20.5-25-16PR(L-3) | **0** | 0 | **0** | 0 | **0** | 0 | **2695** | 8'10" | **390** | 1'3" | **0** | 0 |
| 23.5-25-16PR(L-3) | **+970** | +2,140 | **+770** | +1,700 | **+680** | +1,500 | **2780** | 9'1" | **455** | 1'6" | **+65** | +3" |
| Install additional counterweight | **+340** | +750 | **+900** | +1,985 | **+755** | +1,665 | | | | | | |

## STANDARD EQUIPMENT

- 2-spool valve for boom and bucket controls
- Alternator, 60 A
- Auto shift transmission with mode select system
- Back-up alarm
- Back-up lamp
- Batteries, **136 Ah**/2 x 12 V
- Boom kick-out
- Bucket positioner
- Counterweight
- Directional signal
- Engine, Komatsu SAA6D107E-1 diesel
- Engine shut-off system, electric
- Front fender
- Fuel prefilter with water separator
- Hydraulic-driven fan with reverse rotation
- Lift cylinders and bucket cylinder
- Loader linkage with standard lift boom
- Main monitor panel with EMMS (Equipment Management Monitoring System)
- PPC fingertip control, two levers
- Radiator mask, lattice type
- Rear defroster (electric)
- Rear view mirror
- Rear window washer and wiper
- ROPS/FOPS cab
- Seat, suspension type with reclining
- Seat belt
- Service brakes, wet disc type
- Starting motor, **5.5 kW**/24 V
- Steering wheel, tiltable, telescopic
- Sun visor
- Tires (20.5-25-16PR, L3 tubeless) and rims
- Transmission, 4 forward and 4 reverse

## OPTIONAL EQUIPMENT

- 3-spool valve
- Additional counterweight
- Air conditioner
- AM/FM radio
- AM/FM stereo radio cassette
- Auto air conditioner
- Batteries, **140 Ah**/2 x 12V
- Bucket teeth (bolt-on type)
- Bucket teeth (tip type)
- Counterweight for log
- Cutting edge (bolt-on type)
- Deluxe suspension seat
- ECSS (Electronically Controlled Suspension System)
- Emergency steering (SAE)
- Engine pre-cleaner with extension
- Floor mat
- High lift boom
- Joystick steering
- Limited slip differential (F&R)
- Lock-up clutch torque converter
- Log grapple
- Ordinary spare parts
- Power train guard
- Rear fender
- Tool kit
- Vandalism protection kit

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# WA380-6

**HORSEPOWER**
**Gross: 143 kW** 192 HP @ 2100 rpm
**Net: 142 kW** 191 HP @ 2100 rpm

**BUCKET CAPACITY**
**2.7–4.0 m³** 3.5-5.2 yd³

ecot3

WA 380

WHEEL LOADER


Photo may include optional equipment.

# WALK-AROUND

**HORSEPOWER**
**Gross: 143 kW** 192 HP @ 2100 rpm
**Net: 142 kW** 191 HP @ 2100 rpm

**BUCKET CAPACITY**
**2.7–4.0 m³** 3.5-5.2 yd³

## *High Productivity & Low Fuel Consumption*

- High performance SAA6D107E-1 engine
- Low fuel consumption
- Dual-mode engine power select system
- Automatic transmission with shift timing select system
- Variable displacement piston pump & CLSS

See pages 4 and 5.

## *Excellent Operator Environment*

- Automatic transmission with ECMV
- Electrically controlled transmission lever
- Variable transmission cut-off system
- Telescopic/tilt steering column
- Fingertip control levers
- Low-noise designed cab
- Pillar-less large ROPS/FOPS cab-integrated
- Easy entry/exit, rear-hinged doors

See pages 8 and 9.

## *Increased Reliability*

- Reliable Komatsu designed and manufactured components
- Sturdy main frame
- Maintenance-free, fully hydraulic, wet disc service and parking brakes
- Hydraulic hoses use flat face O-ring seals
- Cathion electrodeposition process is used to apply primer paint
- Powder coating process is used to apply on main structure
- Sealed DT connectors for electrical connections

See page 6.


Photo may include optional equipment.

## *Harmony with Environment*

- Meets EPA Tier 3 and EU Stage 3A emission regulations
- Low exterior noise
- Low fuel consumption

## *Easy Maintenance*

- "EMMS" (Equipment Management Monitoring System)

See page 7.

- Easy access, gull-wing type engine side doors
- Automatic Reversible Fan (option)

# HIGH PRODUCTIVITY AND LOW FUEL CONSUMPTION


## High Performance SAA6D107E-1 Engine

Electronic Heavy Duty Common Rail fuel injection system provides optimum combustion of fuel.
This system also provides fast throttle response to match the machine's powerful tractive effort and fast hydraulic response.

**Net: 142 kW** 191 HP

## Low Emission Engine

This engine meets EPA Tier 3 emission regulations and EU Stage 3A emission regulations, without sacrificing power or machine productivity.

## Low Fuel Consumption

The fuel consumption is reduced greatly because of the low-noise, high-torque engine and the large-capacity torque converter with maximum efficiency in the low-speed range.

## Dual-Mode Engine Power Select System

This wheel loader offers two selectable operating modes—E and P. The operator can adjust the machine's performance with the selection switch.

- **E Mode:** This mode provides maximum fuel efficiency for most of general loading.
- **P Mode:** This mode provides maximum power output for hard digging operation or hill climb.

Dual mode engine power selection switch


The eco indicator will help an operator to promote energy saving.

## Automatic Transmission With Mode Select System

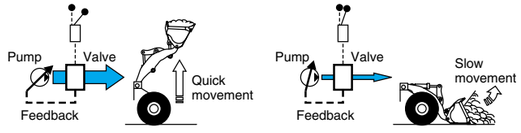
This operator controlled system allows the operator to select manual shifting or two levels of automatic shifting (low, and high).
Auto L mode is for fuel saving operation with the gear shift timing set at lower speeds than Auto H mode. Therefore Auto L mode keeps the engine run in a relatively low rpms range for fuel conservation while yielding adequate tractive force by depressing the accelerator pedal.

Shift mode selection switch

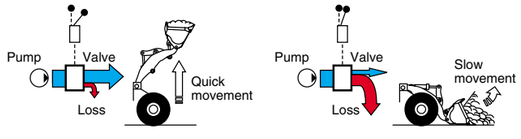
## Variable displacement piston pump & CLSS

New design variable displacement piston pump combined with the Closed-center Load Sensing System delivers hydraulic flow just as the job requires preventing wasting hydraulic pressure. Minimized waste loss contributes to better fuel economy.

- **New Variable Displacement Piston Pump:** The pump delivers only necessary amounts minimizing waste loss.




- **Fixed Displacement Piston Pump:** The pump delivers the maximum amount at any time and the unused flow is disposed.









## Maximum Dumping Clearance and Reach

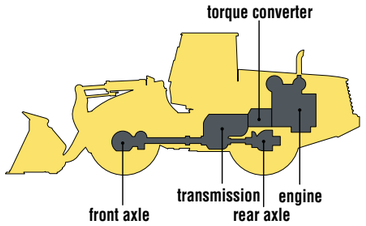
The long lift arms provide high dumping clearances and maximum dumping reach. The operator can even level loads on the body of a dump truck
easily and efficiently.

**Dumping Clearance: 2885 mm** 9'6"
**Dumping Reach: 1210 mm** 4'0"
(**3.3 m³** 4.3 yd³ bucket with B.O.C.)

# INCREASED RELIABILITY

### Komatsu Components

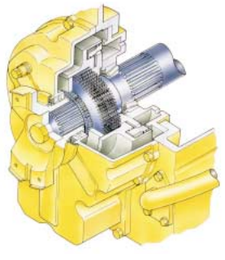
Komatsu manufactures the engine, torque converter, transmission, hydraulic units, electric parts, and even each bolt on this wheel loader. Komatsu loaders are manufactured with an integrated production system under a strict quality control system.

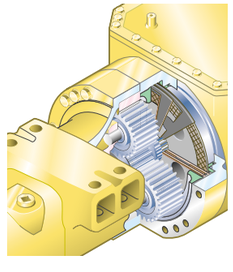



**Wet multi-disc brakes and fully hydraulic braking system** mean lower maintenance costs and higher reliability. Wet disc brakes are fully sealed. Contaminants are kept out, reducing wear and resulting maintenance. Brakes require no adjustments for wear, meaning even lower maintenance. The new parking brake is also an adjustment-free, wet multi-disc for high reliability and long life.

Added reliability is designed into the braking system by the use of two independent hydraulic circuits. Provides hydraulic backup should one of the circuits fail.

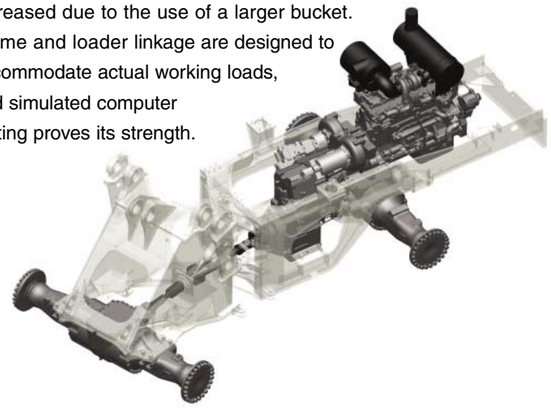
Fully hydraulic brakes mean no air system to bleed, or the condensation of water in the system that can lead to contamination, corrosion, and freezing.





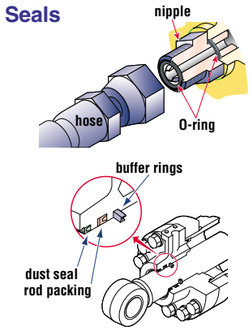
### High-rigidity Frames and Loader Linkage

The front and rear frames and the loader linkage have got more torsional rigidity to secure resistance against stresses increased due to the use of a larger bucket. Frame and loader linkage are designed to accommodate actual working loads, and simulated computer testing proves its strength.



### Flat Face-to-Face O-Ring Seals

Flat face-to-face O-ring seals are used to securely seal hydraulic hose connections and to prevent oil leakage. In addition, buffer rings are installed to the head side of the all-hydraulic cylinders to lower the load on the rod seals and maximize the reliability.




### Cathion Electrodeposition Primer Paint/ Powder Coating Final Paint

Cathion electrodeposition paint is applied as a primer paint and powder coating is applied as topcoat to the exterior metal sheet parts. This process results in a beautiful rust-free machine, even in the most severe environments. Some external parts are made of plastic providing long life and high impact resistance.

### Sealed DT Connectors

Main harnesses and controller connectors are equipped with sealed DT connectors providing high reliability, water resistance and dust resistance.





# EASY MAINTENANCE

Photo may include optional equipment.

### EMMS (Equipment Management Monitoring System)

Monitor is mounted in front of the operator for easy view, allowing the operator to easily check gauges and warning lights.

A specially designed two-spoke steering wheel allows the operator to easily see the instrument panel.

**Maintenance Control and Troubleshooting Functions**

- **Action code display function:** If the loader has any troubles, the monitor displays action details on the character display at the center bottom of the monitor.
- **Monitor function:** Controller monitors engine oil level, pressure, coolant temperature, air cleaner clogging, etc. If controller finds abnormalities, all of these are displayed on LCD.
- **Replacement time notice function:** Monitor informs replacement time of oil and filters on LCD when it reaches replacement intervals.
- **Trouble data memory function:** Monitor stores abnormalities for effective troubleshooting.

### Gull-wing Type Engine Side Doors Open Wide

The operator can open and close each gull-wing type engine side door easily with the assistance of a gas spring to perform daily service checks from the ground.

### Ease of Radiator Cleaning

If the machine is operating in adverse conditions, the operator can reverse the hydraulic cooling fan from inside the cab by turning on a switch on the control panel.

### Automatic Reversible Fan (option)

The engine fan is driven hydraulically. It can be operated in reverse automatically. When switch is automatic position. The fan revolves in reverse for 2minutes every 2 hours intermittently. (Default setting)


**B**: Manual Reverse Mode
**A**: Normal rotation Mode
**C**: Auto Reverse Mode

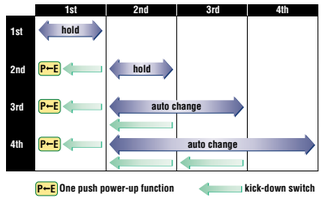
# OPERATOR ENVIRONMENT

## Easy Operation

### Automatic Transmission with ECMV

Automatic transmission with ECMV automatically selects the proper gear speed based on travel speed, engine speed, and other travel conditions. The ECMV (Electronically Controlled Modulation Valve) system engages the clutch smoothly to prevent lags and shocks when shifting. This system provides efficient machine operation and a comfortable ride.

- **Kick-down switch:** Consider this valuable feature for added productivity. With the touch of a finger, the kick-down switch automatically downshifts from second to first when beginning the digging cycle. It automatically upshifts from first to second when the direction control lever is placed in reverse. This results in increased rim pull for better bucket penetration and reduced cycle times for higher productivity.




- **One push power-up function:** The kick-down switch also functions as a power-up switch in first gear. The first time the kick-down switch is depressed it functions as a kick-down switch and gear speed is reduced. When the machine is in E operation mode and first gear, pressing the kick-down switch a second time changes the operation mode to P allowing increased power for heavy digging operation. The operation mode returns to E when machine gear speed changes or direction changes to reverse.
- **Hold switch:** Auto shift is selected and if the operator turns on this switch when the lever is at the 3rd or 4th gear speed position, the transmission is fixed to that gear speed.

### Electronically Controlled Transmission Lever

**Easy shifting and directional changes** with Komatsu two-lever electronic shifting. Change direction or shift gears with a touch of the fingers without removing the shifting hand from the steering wheel. Solid state electronics and conveniently located direction and gear shift controls make this possible. Automatic shifts in ranges two through four keep production high and manual shifting at a minimum.

### Variable Transmission Cut-off System

The operator can continuously adjust the transmission cut-off pressure desired for the left brake pedal using switch located on the right-side control panel. The operator can improve the working performance by setting the cut-off pressure properly depending on working condition.

- High cut-off pressure for digging operations.
- Low cut-off pressure for truck-loading operations.


1:Cut-off ON/OFF switch 2:Cut off adjustment switch
3:Fan reverse ON/OFF switch 4:Boom control 5:Bucket control

Photo may include optional equipment.

### Fingertip Work Equipment Control levers with Large size arm rest

New PPC control levers are used for the work equipment. The operator can easily operate the work equipment with fingertip control, reducing operator fatigue and increasing controllability. The PPC control lever column can be slid forward or rearward and the large size arm rest can be adjusted up or down to provide the operator with a variety of comfortable operating positions.

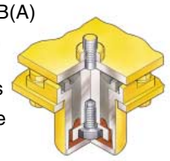
### Telescopic/Tilt Steering Column

The operator can tilt and telescope the steering column to provide a comfortable working position.

## Comfortable Operation

### Low-noise Design

Noise at operator's ear noise level : 72 dB(A)
Dynamic noise level (outside): 108 dB(A)



The large cab is mounted with Komatsu's unique ROPS/FOPS viscous mounts. The low-noise engine, hydraulically driven fan, and hydraulic pumps are mounted with rubber cushions, and the cab sealing is improved to provide a quiet, low-vibration, dustproof with pressurizing, and comfortable operating environment. Also, exterior noise is lowest in this class.

### Pillar-less Large Cab

A wide pillar-less flat glass provides excellent front visibility. The wiper arm covers a large area to provide great visibility even on rainy days. The cab area is the largest in its class providing maximum space for the operator. Increased seat reclining and slide adjustment to backward by introducing front mounted air conditioner unit.

### Rear-hinged Full Open Cab Doors

The cab door hinges are installed to the rear side of the cab providing a large opening angle for the operator to enter and exit. The steps are designed like a staircase, so that the operator can get on and off the cab easily.

# SPECIFICATIONS

## ENGINE

Model . . . . . .Komatsu SAA6D107E-1
Type . . . . . .Water-cooled, 4-cycle
Aspiration . . . . . .Turbocharged, aftercooled
Number of cylinders . . . . . .6
Bore x stroke . . . . . .**107 mm x 124 mm** 4.21" x 4.88"
Piston displacement . . . . . .**6.69 ltr** 408 in³
Governor . . . . . .All-speed, electronic
Horsepower
SAE J1995 . . . . . .Gross **143 kW** 192 HP
ISO 9249/SAE J1349* . . . . . .Net **142 kW** 191 HP
Rated rpm . . . . . .2100 rpm
Fan drive method for radiator cooling . . . . . .Hydraulic
Fuel system . . . . . .Direct injection
Lubrication system:
Method . . . . . .Gear pump, force-lubrication
Filter . . . . . .Full-flow type
Air cleaner . . . . . .Dry type with double elements and dust evacuator, plus dust indicator

*Net horsepower at the maximum speed of radiator cooling fan is 133 kW 179 HP.

## TRANSMISSION

Torque converter:
Type . . . . . .3-element, single-stage, single-phase
Transmission:
Type . . . . . .Automatic full-powershift, countershaft type
Travel speed: **km/h** mph
Measured with 20.5-25 tires

| | 1st | 2nd | 3rd | 4th |
|---|---|---|---|---|
| Forward | **6.0** 3.7 | **10.6** 6.7 | **18.6** 11.6 | **31.1** 19.3 |
| Reverse | **6.5** 4.0 | **11.3** 7.0 | **19.9** 12.4 | **33.0** 20.5 |

Measured with 23.5-25 tires

| | 1st | 2nd | 3rd | 4th |
|---|---|---|---|---|
| Forward | **6.6** 4.1 | **11.5** 7.1 | **20.2** 12.6 | **34.0** 21.1 |
| Reverse | **7.1** 4.4 | **12.3** 7.6 | **21.5** 13.4 | **35.5** 22.1 |

## AXLES AND FINAL DRIVES

Drive system . . . . . .Four-wheel drive
Front . . . . . .Fixed, semi-floating
Rear . . . . . .Center-pin support, semi-floating, 26° total oscillation
Reduction gear . . . . . .Spiral bevel gear
Differential gear . . . . . .Conventional type
Final reduction gear . . . . . .Planetary gear, single reduction

## BRAKES

Service brakes . . . . . .Hydraulically actuated, wet disc brakes actuate on four wheels
Parking brake . . . . . .Wet disc brake
Emergency brake . . . . . .Parking brake is commonly used

## STEERING SYSTEM

Type . . . . . .Articulated type, full-hydraulic power steering
Steering angle . . . . . .35° each direction (40° end stop)
Minimum turning radius at
the center of outside tire . . . . . .**6320 mm** 20'9"

## HYDRAULIC SYSTEM

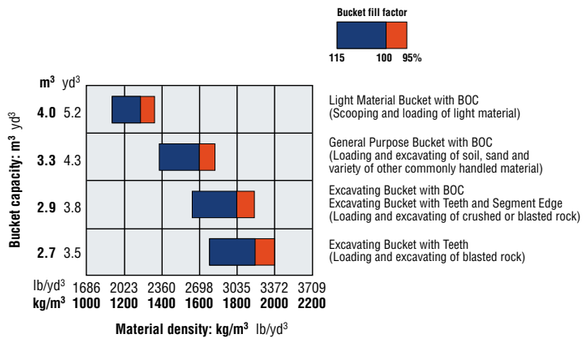
Steering system:
Hydraulic pump . . . . . .Piston pump
Capacity . . . . . .**138 ltr/min** 36.5 U.S. gal/min at rated rpm
Relief valve setting . . . . . .**24.5 MPa** 250 kgf/cm² 3,555 psi
Hydraulic cylinders:
Type . . . . . .Double-acting, piston type
Number of cylinders . . . . . .2
Bore x stroke . . . . . .**75 mm x 442 mm** 3.0" x 17.4"

Loader control:
Hydraulic pump . . . . . .Piston pump
Capacity . . . . . .**205.5 ltr/min** 54.3 U.S. gal/min
Relief valve setting . . . . . .**31.4 MPa** 320 kgf/cm² 4,550 psi
Hydraulic cylinders:
Type . . . . . .Double-acting, piston type
Number of cylinders—bore x stroke:
Boom cylinder . . . . . .2- **130 mm x 713 mm** 5.1" x 28.1"
Bucket cylinder . . . . . .1- **150 mm x 535 mm** 5.9" x 21.1"
Control valve . . . . . .2-spool type
Control positions:
Boom . . . . . .Raise, hold, lower, and float
Bucket . . . . . .Tilt-back, hold, and dump
Hydraulic cycle time (rated load in bucket)
Raise . . . . . .5.9 sec
Dump . . . . . .1.8 sec
Lower (Empty) . . . . . .3.3 sec

## SERVICE REFILL CAPACITIES

| | | |
|---|---|---|
| Cooling system | **30.5 ltr** | 8.1 U.S. gal |
| Fuel tank | **300 ltr** | 79.3 U.S. gal |
| Engine | **23 ltr** | 6.1 U.S. gal |
| Hydraulic system | **139 ltr** | 36.6 U.S. gal |
| Axle (each front and rear) | **40 ltr** | 10.6 U.S. gal |
| Torque converter and transmission | **38 ltr** | 10.0 U.S. gal |

## BUCKET SELECTION GUIDE

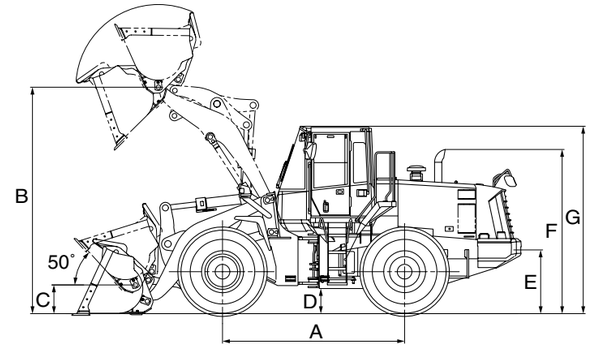







## DIMENSIONS

Measured with 20.5-25-16PR (L3) tires, ROPS/FOPS cab




| | | | |
|---|---|---|---|
| | Tread | **2160 mm** | 7'1" |
| | Width over tires | **2695 mm** | 8'10" |
| A | Wheelbase | **3300 mm** | 10'10" |
| B | Hinge pin height, max. height | **4030 mm** | 13'3" |
| C | Hinge pin height, carry position | **520 mm** | 1'8" |
| D | Ground clearance | **390 mm** | 1'3" |
| E | Hitch height | **1085 mm** | 3'7" |
| F | Overall height, top of the stack | **2910 mm** | 9'7" |
| G | Overall height, ROPS cab | **3325 mm** | 10'11" |

| | General Purpose Buckets | | Excavating Buckets | | | Light Material Bucket |
|---|---|---|---|---|---|---|
| | Bolt-on Cutting Edges | Teeth | Bolt-on Cutting Edges | Teeth and Segments | Teeth | Bolt-on Cutting Edges |
| Bucket capacity: heaped | **3.3 m³** 4.3 yd³ | **3.1 m³** 4.1 yd³ | **2.9 m³** 3.8 yd³ | **2.9 m³** 3.8 yd³ | **2.7 m³** 3.5 yd³ | **4.0 m³** 5.2 yd³ |
| struck | **2.9 m³** 3.8 yd³ | **2.7 m³** 3.5 yd³ | **2.4 m³** 3.1 yd³ | **2.4 m³** 3.1 yd³ | **2.3 m³** 3.0 yd³ | **3.4 m³** 4.4 yd³ |
| Bucket width | **2905 mm** 9'6" | **2925 mm** 9'7" | **2905 mm** 9'6" | **2925 mm** 9'7" | **2925 mm** 9'7" | **2905 mm** 9'6" |
| Bucket weight | **1620 kg** 3,570 lb | **1540 kg** 3,395 lb | **1720 kg** 3,790 lb | **1765 kg** 3,890 lb | **1645 kg** 3,625 lb | **1835 kg** 4,045 lb |
| Dumping clearance, max. height and 45° dump angle* | **2885 mm** 9'6" | **2755 mm** 9'0" | **2960 mm** 9'9" | **2840 mm** 9'4" | **2840 mm** 9'4" | **2790 mm** 9'2" |
| Reach at max. height and 45° dump angle* | **1210 mm** 4'0" | **1305 mm** 4'3" | **1125 mm** 3'8" | **1225 mm** 4'0" | **1225 mm** 4'0" | **1295 mm** 4'3" |
| Reach at **2130 mm** (7') clearance and 45° dump angle | **1760 mm** 5'9" | **1790 mm** 5'10" | **1720 mm** 5'8" | **1755 mm** 5'9" | **1755 mm** 5'9" | **1800 mm** 5'11" |
| Reach with arm horizontal and bucket level | **2650 mm** 8'8" | **2810 mm** 9'3" | **2510 mm** 8'3" | **2680 mm** 8'10" | **2680 mm** 8'10" | **2775 mm** 9'1" |
| Operating height (fully raised) | **5535 mm** 18'2" | **5535 mm** 18'2" | **5420 mm** 17'9" | **5420 mm** 17'9" | **5420 mm** 17'9" | **5670 mm** 18'7" |
| Overall length | **8195 mm** 26'11" | **8365 mm** 27'5" | **8055 mm** 26'5" | **8225 mm** 27'0" | **8225 mm** 27'0" | **8320 mm** 27'4" |
| Loader clearance circle (bucket at carry, outside corner of bucket) | **14440 mm** 47'5" | **14550 mm** 47'9" | **14370 mm** 47'2" | **14480 mm** 47'6" | **14480 mm** 47'6" | **14500 mm** 47'7" |
| Digging depth: 0° | **125 mm** 4.9" | **140 mm** 5.5" | **125 mm** 4.9" | **140 mm** 5.5" | **140 mm** 5.5" | **125 mm** 4.9" |
| 10° | **360 mm** 1'2" | **400 mm** 1'4" | **335 mm** 1'1" | **380 mm** 1'3" | **380 mm** 1'3" | **380 mm** 1'3" |
| Static tipping load: straight | **13880 kg** 30,600 lb | **13970 kg** 30,800 lb | **13780 kg** 30,380 lb | **13710 kg** 30,230 lb | **13870 kg** 30,580 lb | **13640 kg** 30,070 lb |
| 40° full turn | **12000 kg** 26,460 lb | **12100 kg** 26,680 lb | **11900 kg** 26,230 lb | **11840 kg** 26,100 lb | **12000 kg** 26,460 lb | **11770 kg** 25,950 lb |
| Breakout force | **158 kN** 16100 kgf 35,495 lb | **170 kN** 17300 kgf 38,140 lb | **176 kN** 18000 kgf 39,680 lb | **183 kN** 18700 kgf 41,225 lb | **191 kN** 19500 kgf 42,990 lb | **144 kN** 14700 kgf 32,405 lb |
| Operating weight | **16610 kg** 36,620 lb | **16540 kg** 36,460 lb | **16720 kg** 36,860 lb | **16760 kg** 36,950 lb | **16650 kg** 36,710 lb | **16850 kg** 37,150 lb |

* At the end of tooth or B.O.C.

All dimensions, weights, and performance values based on SAE J732c and J742b standards.

Static tipping load and operating weight shown include lubricant, coolant, full fuel tank, ROPS cab, and operator. Machine stability and operating weight affected by counterweight, tire size, and other attachments.

Apply the following weight changes to operating weight and static tipping load.