

S510

2032.0 mm

1374.0 mm

1643.0 mm

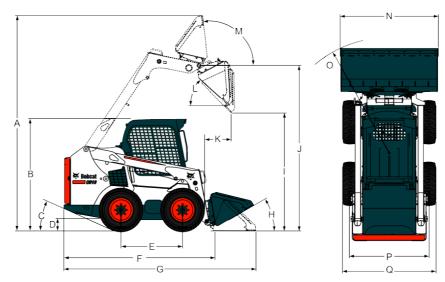
Loaders
Specifications

Dimensions

(O) Turning radius with standard bucket

(P) Track, standard tyres

(Q) Width over standard tyres



(A)	Operating height	3787.0 mm
(B)	Height with operator cab	1972.0 mm
(C)	Angle of departure	24°
(D)	Ground clearance	185.0 mm
(E)	Wheelbase	1082.0 mm
(F)	Length without attachment	2657.0 mm
(G)	Length with standard bucket	3378.0 mm
(H)	Rollback at ground position	30°
(I)	Dump height with standard bucket	2205.0 mm
(J)	Height to bucket hinge pin	2908.0 mm
(K)	Dump reach at maximum height	467.0 mm
(L)	Dump angle at maximum height	42°
(M)	Rollback fully raised at maximum height	97°
(N)	Width over standard bucket	1727.0 mm
(N)	Bucket width, 62-inch	1575.0 mm
(N)	Bucket width, 74-inch	1880.0 mm



Lift breakout force	Machine Rating	
Raise lift arms	Tilt breakout force Rated operating capacity (ISO 14397-1) Tipping load (ISO 14397-1)	1485 daN 810 kg 1619 kg
Lower lift arms	Cycle Times	
Operating weight Shipping weight Engine Make / Model Make / Model Fuel Cooling Power (SAE J1995) at 2800 RPM: Rated speed (EEC 80/1269, ISO 9249) Torque (SAE J 1995) at 1700 RPM: Number of cylinders Displacement Bore Stroke Orankcase ventilation Air filter Ignition Starting aid Electrical Alternator Battery Pump type Pump type Pump type Pump type Pump type Control valve BMAke / Model Kubota / V2203-M-DI-E2B-BC-3 Diesel Kubota / V2203-M-DI-E2B-BC-3 Diesel Kubota / V2203-M-DI-E2B-BC-3 Diesel Liquid Sa6.4 kW Rubota / V2203-M-DI-E2B-BC-3 Diesel Liquid Poiesel Sa6.4 kW Sa6.4 kW Sa6.4 RW Sa6	Lower lift arms Bucket rollback Bucket dump	2.8 s 1.7 s
Engine Make / Model Fuel Cooling Power (SAE J1995) at 2800 RPM: Rated speed (EEC 80/1269, ISO 9249) Torque (SAE J 1995) at 1700 RPM: Number of cylinders Bore Stroke Lubrication Crankcase ventilation Air filter Ignition Starting aid Electrical Alternator Battery Alternator Battery Alternator Battery Alternator Battery Alternator Batter Alternator Batter Bengine driven, gear type Ch.70 L/min System Engine driven, gear type Control valve Engine driven, gear type With float detent on lift and electrically controlled auxiliary spool Hydraulic filter Full-flow replaceable — 10 µm synthetic media element Full-flow replaceable — 10 µm synthetic media element		
Make / Model Fuel Cooling Diesel Cooling Power (SAE J1995) at 2800 RPM: Rated speed (EEC 80/1269, ISO 9249) Torque (SAE J 1995) at 1700 RPM: Number of cylinders Displacement Bore Stroke Lubrication Crankcase ventilation Air filter Ignition Starting aid Electrical Alternator Battery Alternator Battery Starter Pump type Pump capacity System relief at quick couplers Control valve Hydraulic filter Full-flow replaceable — 10 µm synthetic media element		
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Alternator Battery 90 A — open frame with internal regulator 12 V — 600 A cold cranking at -18°C — 115 min reserve capacity at 25 A Starter 12 V — gear reduction type — 2.7 kW (3.6 hp) Hydraulic System Pump type Pump capacity System relief at quick couplers Control valve Engine driven, gear type 64.70 L/min 23.8-24.5 MPa Control valve Three-spool, open-centre type with float detent on lift and electrically controlled auxiliary spool Hydraulic filter Full-flow replaceable — 10 µm synthetic media element	Fuel Cooling Power (SAE J1995) at 2800 RPM: Rated speed (EEC 80/1269, ISO 9249) Torque (SAE J 1995) at 1700 RPM: Number of cylinders Displacement Bore Stroke Lubrication Crankcase ventilation Air filter Ignition Starting aid	Diesel Liquid 36.4 kW 2800.0 RPM 150.0 Nm 4 2196 cm³ 87.0 mm 92.0 mm Gear pump pressure Closed breathing Dry replaceable cartridge with safety element Diesel-compression
Battery 12 V — 600 A cold cranking at -18 °C — 115 min reserve capacity at 25 A Starter 12 V — gear reduction type — 2.7 kW (3.6 hp) Hydraulic System Pump type Pump capacity System relief at quick couplers Control valve Engine driven, gear type 64.70 L/min 23.8-24.5 MPa Three-spool, open-centre type with float detent on lift and electrically controlled auxiliary spool Hydraulic filter Full-flow replaceable — 10 µm synthetic media element		OO A area frame with internal regulator
Starter Hydraulic System Pump type Pump capacity System relief at quick couplers Control valve Hydraulic filter Pump type Pump capacity System relief at quick couplers Control valve Three-spool, open-centre type with float detent on lift and electrically controlled auxiliary spool Full-flow replaceable — 10 µm synthetic media element		12 V — 600 A cold cranking at -18°C — 115 min reserve
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Pump capacity System relief at quick couplers Control valve Three-spool, open-centre type with float detent on lift and electrically controlled auxiliary spool Hydraulic filter Full-flow replaceable — 10 µm synthetic media element	Hydraulic System	
י יפיק ייייסט טרעב אנמוזעמוע נעטלוווופא, ווטאפא, מווע ווננווועא	Pump capacity System relief at quick couplers Control valve Hydraulic filter	64.70 L/min 23.8-24.5 MPa Three-spool, open-centre type with float detent on lift and electrically controlled auxiliary spool Full-flow replaceable — 10 µm synthetic media element



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Lift cylinder (2)	Double-acting
Lift cylinder bore	57.2 mm
Lift cylinder rod	38.1 mm
Lift cylinder stroke	698.5 mm
Tilt cylinder (2)	Double-acting
Tilt cylinder bore	69.9 mm
Tilt cylinder rod	38.1 mm
Tilt cylinder stroke	330.7 mm

Drive System

Transmission	Infinitely variable tandem hydrostatic piston pumps, driving

two fully reversing hydrostatic motors

Final drive chains Pre-stressed #80 HSOC endless roller chain (no master

link) and sprockets in sealed chaincase with oil lubrication. (Chains do not require periodic adjustments.) Two chains

per side with no idler sprocket. Fully hydrostatic; four-wheel drive

Axle size 50.3 mm, heat treated. Axle tubes welded to chaincase.

Labyrinth axle seal protection.

Wheel bolts Eight 9/16–inch wheel bolts fixed to axle hubs

Traction

Main drive

Standard tyres	10 x 16.5, 10–ply, Bobcat heavy duty
Heavy duty tyres	10 x 16.5, 10-ply, Bobcat heavy duty, offset rims
Severe duty tyres	10 x 16.5, 10–ply, Bobcat severe duty
Poly fill tyres	10 x 16.5, 10-ply, Bobcat severe duty, poly filled
Solid flex tyres (option)	12 x 16.5, Bobcat solid flex
Float tyres	31 x 12-16.5, 10-ply, Bobcat superflotation
Max. travel speed (low range)	11.8 km/h
Max. travel speed (high range - option)	17.3 km/h
Gradeability	11°

Fluid Capacities

Chaincase reservoir	32.20 L
Cooling system	11.40 L
Cooling system with heater	11.70 L
Engine oil with filter	8.70 L
Fuel tank	93.70 L
Hydraulic reservoir	7.57 L
Hydraulic / Hydrostatic system	31.80 L



S510

Loaders Specifications

Fluid Specifications

Engine coolant

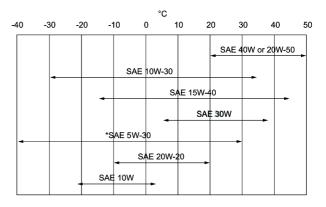
Engine oil

Hydraulic fluid

Propylene glycol/water mix (53% - 47%) with freeze protection to -37°C

5 L can - 6904844A, 25 L container - 6904844B, 209 L drum - 6904844C, 1000 L tank - 6904844D

Oil must meet API Service Classification of CD, CE, CF4, CG4, or better. Recommended SAE viscosity number for anticipated temperature range.



* Can be used only when available with appropriate diesel rating. For synthetic oil use the recommendation from the oil manufacturer.

Bobcat Superior SH, 5 L can - 6904842A, 25 L container - 6904842B, 209 L drum - 6904842C, 1000 L tank - 6904842D

Bobcat Bio Hydraulic, 5 L can - 6904843A, 25 L container - 6904843B, 209 L drum - 6904843C, 1000 L tank - 6904843D

Motor oil is not an acceptable alternative fluid.

Controls

Engine Starting

Front auxiliary (standard)
Rear auxiliary (optional)
Loader hydraulics tilt and lift

Service brake

Parking brake

Parking brake, two-speed option

Vehicle steering

Hand lever throttle

Key-type starter switch and shutdown or optional keyless start. Glow plugs automatically activated by Standard or Deluxe instrument panel.

Electrical switch on right-hand steering lever Electrical switch on left-hand steering lever

Separate foot pedals or optional Advanced Control System (ACS), Advanced Hand Controls (AHC) or Selectable Joystick Controls (SJC)

Two independent hydrostatic systems controlled by two hand-operated steering levers

Mechanical disc, hand-operated rocker switch on dash panel

Spring applied, pressure released multi-disk brake activated by rocker switch

Direction and speed controlled by two hand levers or optional Advanced Control System (ACS), Advanced Hand Controls (AHC) or Selectable Joystick Controls (SJC)



Auxiliary pressure release

Pressure is relieved through the coupler block. Push in and hold for 5 s.

Instrumentation

The following loader functions are monitored by a combination of gauges and warning lights in the operator's line of sight. The system alerts the operator of monitored loader malfunctions by way of audible alarm and visual warning lights.

Standard Instrument Panel

- · Gauges
 - Engine coolant temperature
 - Fuel
- Indicators
 - Bobcat Interlock Control System
 - Engine preheat
 - Two speed
 - Turn signals
- · Warning lights
 - Engine coolant temperature
 - Fuel level
 - General warning
 - Seat belt
 - Seatbar down
 - Engine malfunction
 - Hydraulic system malfunction
 - Lift and tilt valve, hydraulics lock-out
 - Parking brake
 - · Hydraulic oil temperature
 - · Engine oil pressure
 - · Hydraulic oil pressure
- Buttons
 - · Work lights and road lights
 - High flow auxiliary hydraulics
 - Auxiliary hydraulics
 - Information (Hour meter, Engine RPM, Battery voltage, Service codes, Service reminder, Maintenance clock)
 - Traction lock override
 - Press to operate loader
- · Rocker switch
 - Parking brake
- Alarm
 - Beep when error, warning or shutdown condition exists

Deluxe Instrument Panel (Option)

Same gauges, warning lights and other features as Standard Instrument Panel, plus:

- Gauges
 - Engine oil pressure / temperature
 - Hydrostatic charge pressure
 - Hydraulic oil temperature
 - Battery



- · Additional features
 - Keyless start with password capability
 - Digital clock
 - User name and hourmeter
 - Attachments control information
 - Current job hours
 - High Flow lockouts
 - Multi-language display
 - · Help screens
 - Diagnostic capability
 - Engine/hydraulic systems shutdown function
 - Password lockout
- Icons
 - Active warnings
 - Vitals (Engine speed, Oil Pressure, Temperature, System voltage, Hydraulic charge pressure, Oil temperature)
 - Service
 - Main screen
 - Attachments
 - Security
 - Display
- Buttons
 - · Left scroll
 - Enter
 - · Right scroll

Serviceability

Access is available to the following through the rear door/tailgate and rear screen:

- · Air cleaner
- Alternator
- Battery
- · Cooling system (engine oil and hydraulic oil coolers easily separable) for cleaning
- · Engine oil and fuel filters
- Engine oil drain and dipstick
- · Hydraulic oil fill (access at the side of the machine)
- Starter

Axle hubs provide protection for the axle seals

Bob-Tach™ pivots have replaceable wear bushings

Easy access to all lift arm grease points

Rod end of the tilt cylinder has a replaceable bushing

Tailgate has an optional lock for vandal-proofing

Tailgate is equipped with door-stop to hold door open while servicing

Tip-up operator cab gives access to certain hydraulic system components

Standard Features

- · Cushion suspension seat
- · Automatically activated glow plugs
- · Auxiliary hydraulics: variable flow/maximum flow
- Bob-Tach™ frame
- Bobcat Interlock Control System (BICS)
- Deluxe operator cab* Includes interior cab foam, side, top and rear windows, Deluxe wire harness, dome light, and electrical power port, cup holder, storage place, horn ¹
- Electrically activated proportional front auxiliary hydraulics



- · Engine/hydraulics system shutdown
- Hydraulic bucket positioning (including ON/OFF switch)
- Instrumentation
- · Lift arm support
- · Noise reduction kit
- · Work lights, front and rear
- · Parking brake
- · Seat belt
- · Seat bar
- · Spark arrestor muffler
- 10 x 16.5, 10-ply, Heavy duty tyres
- · CE certification
- · Warranty: 12 months or 2000 hours (whichever occurs first)

Options

- · Factory Options
 - Deluxe instrument panel
 - Power Bob-Tach™
 - · Cab enclosure with heating
 - 10 x 16.5, 10-ply, Heavy duty tyres, offset rims
 - ∘ 10 x 16.5, 10–ply, Severe duty tyres
 - 12 x 16.5, 12-ply, Severe duty tyres, poly filled
 - 12 x 16.5, Solid flex tyres
 - ∘ 31 x 12-16.5, 10–ply, Superflotation tyres
 - Advanced Control System (ACS)
 - Advanced Hand Controls (AHC)
 - Selectable Joystick Controls (SJC)
 - Two speed
 - · Air ride seat with 2 point seat belt
 - Back-up alarm
 - Beacon
 - Engine block heater
 - Fire extinguisher
 - Radio
 - Road kit
 - Strobe



- · Dealer Installed Options
 - · Cab enclosure kit
 - Special applications front door kit
 - 200 lbs (74.4 kg) counterweight kit
 - Front axle counterweight kit
 - Fuel cap locking kit
 - Deluxe instrument panel
 - Replacement Bob-Tach™
 - Fresh air heater kit
 - Front door kit
 - Door sensor kit
 - Plumbing kit for fresh air heater
 - Back up alarm kit
 - FOPS kit **
 - Single-point lift kit
 - Power Bob-Tach™ kit
 - · Operator cab, CE, enclosure kit
 - 7-pin attachment control kit
 - · Four-point lift kit
 - · Rear auxiliary hydraulic kit
 - Engine block heater kit
 - Road kit
 - · Bucket positioning kit
 - Keyless kit
 - · Rear window wiper kit
 - 14-pin attachment control kit
 - 4-Way flasher kit
 - 80 mm Suspension seat kit
 - · Cup holder kit
 - Headlight guard kit
 - Muffler guard kit
 - · Tail light guard kit

Attachments

- · Angle Brooms
- Augers
- · Backhoes
- · Bale Forks
- Box Blades
- · Breakers
- · Brush Saws
- Bucket Adapters
- · Combination Buckets
- · Concrete Mixers
- · Construction / Industrial Buckets
- Diggers
- Dozer Blades
- Drop Hammers
- Dumping Hoppers
- · Fertilizer Buckets
- Flail Cutters
- · General Purpose Buckets

- Planers
- Root Grapples
- Rotary Cutters
- Scarifiers
- Scrapers
- Seeders
- Skeleton Buckets
- Snow & Light Material Buckets
- Snow Blades
- · Snowblowers
- Snow Pushers
- Snow V-Blades
- Sod Layers
- · Soil Conditioners
- Spare Wheels
- Spreaders
- Stabilizers
- Stump Grinders



- Graders
- · Grapples, Industrial
- Landplanes
- Landscape Rakes
- Laser Equipment
- · Low Profile Buckets
- Miscellaneous
- · Mixing Buckets
- Mowers
- Packer Wheels
- · Pallet Forks, Hydraulic
- · Pallet Forks, Standard

- Sweepers
- Tillers
- Tilt-Tatch
- Tracks
- · Tree Transplanters
- Trench Compactors
- Trenchers
- · Utility Forks
- Utility Frames
- Vibratory Rollers
- · Water Kits
- · Whisker Brooms

Environmental

Fuel consumption at 100% engine load	10.60 L/min
Fuel consumption at 70% engine load	8.70 L/min
Fuel consumption at 50% engine load	7.60 L/min
Fuel consumption at 30% engine load	7.20 L/min



Safety

Bobcat Interlock Control System (BICS), standard

Lift arm bypass control, standard

Seat belt, standard

Seat bar, standard Operator cab, standard

Lift arm support, standard Parking brake, standard Grab handles, standard Safety tread, standard

Attachment steps, standard Rear window, standard Front and rear work lights, standard Back-up alarm, optional Lift kits, optional

Special applications kit, optional Operator handbook, standard

Requires the operator to be seated in the loader with the seat bar in place and the engine running. After the operator presses the "Press to Operate Loader" button, the loader's hydraulic lift and tilt functions and traction drive can be operated.

Used to lower the lift arms in the event that the lift arms cannot be lowered during normal operating conditions. Should always be worn when operating the loader. Three-point shoulder belt provides restraint for high range speeds.

Secondary operator restraint, also serves as an arm rest. An enclosed operator cab with side screens with a minimal inside cab width of 838 mm. Meets SAE-J1040 and ISO 3471 for Roll Over Protective Structure (ROPS) and SAE-J1043 and ISO 3449 Level I * for Falling Objects Protective Structure (FOPS). Level II ** option is available. * Level I — Acceptance is intended for protection from falling bricks, small concrete blocks, and hand tools encountered in operations such as highway maintenance, landscaping, and other construction site services.

** Level II — Acceptance is intended for protection from falling trees or rocks for machines involved in site clearing, overhead demolition, or forestry.

Use for servicing when lift arms are raised.

Always set brake when leaving loader.

Should always be used when entering/exiting loader. Slip resistant tread on lift arms and main frame to be used when entering/exiting loader.

Should always be used when entering/exiting loader. For emergency exit.

Use for indoor and low light operation.

For use in areas with high traffic

Lift kits are available so loader may be lifted into remote areas.

Restricts objects and material from entering cab openings. Weather-resistant operator handbook attached to the inside of the cab, providing operational instructions and warnings decals with pictorials and international symbols.