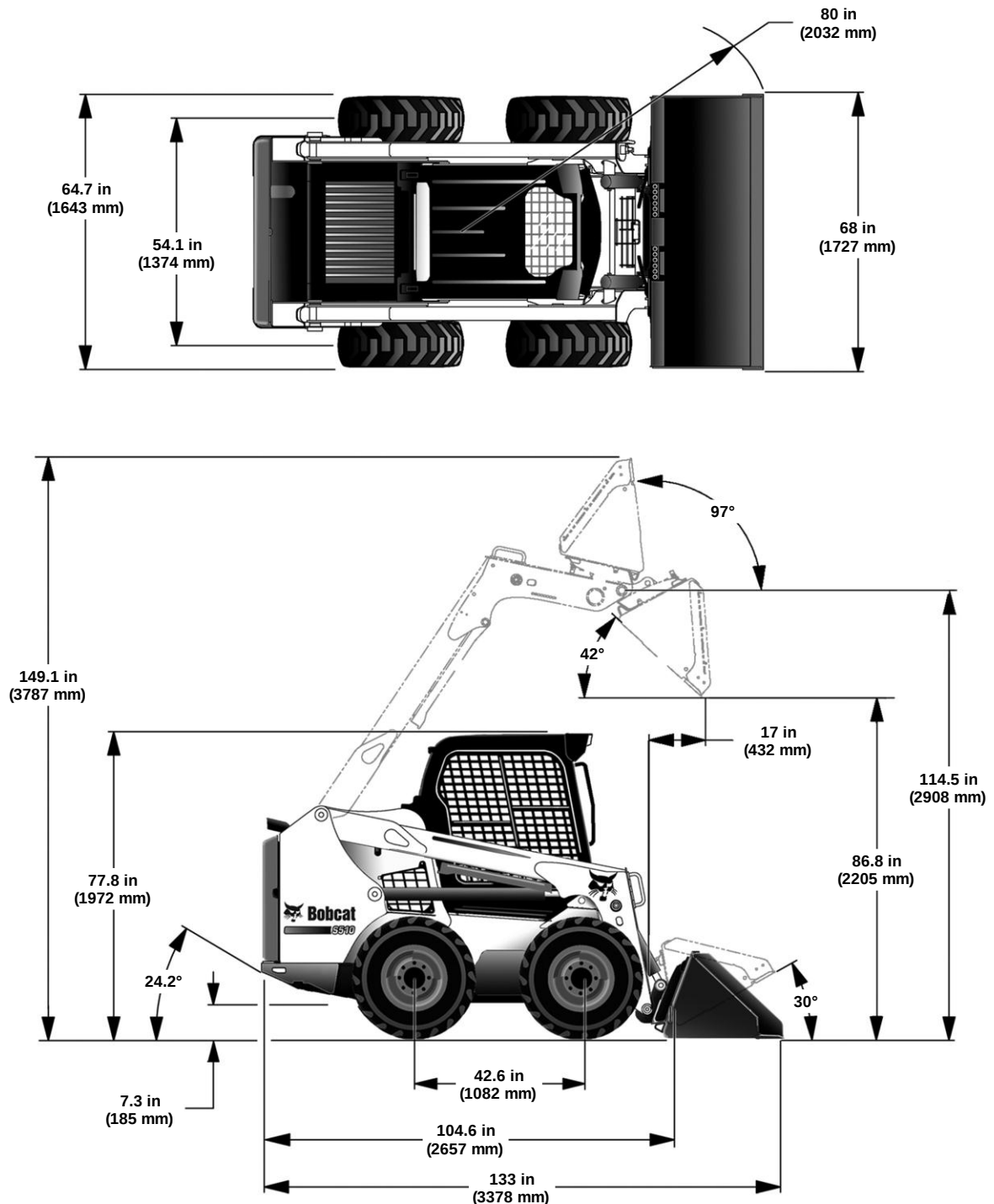


# S510 SKID-STEER LOADER SPECIFICATIONS

## Loader Dimensions

- Dimensions are given for loader equipped with standard tires and 68 in. Construction and Industrial bucket and may vary with other bucket types. All dimensions are shown in inches. Respective metric dimensions are given in millimeters enclosed by parentheses.
- Where applicable, specifications conform to SAE or ISO standards and are subject to change without notice.



## Bobcat S510 Skid-Steer Loader Specifications

### PERFORMANCE

|                                                                                                   |                                                                                                   |
|---------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| Rated Operating Capacity                                                                          | 1650 lb (748 kg)                                                                                  |
| with 200 Pound Frame Mounted Counterweight Kit                                                    | 1800 lb (816 kg)                                                                                  |
| Tipping Load                                                                                      | 3300 lb (1497 kg)                                                                                 |
| Operating Weight                                                                                  | 5922 lb (2686 kg)                                                                                 |
| Breakout Force - Lift                                                                             | 3242 lb (1470 kg)                                                                                 |
| Breakout Force - Tilt                                                                             | 3276 lb (1485 kg)                                                                                 |
| Push Force                                                                                        | 5306 lb (2406 kg)                                                                                 |
| Travel Speed:<br>- Single Speed Loader<br>- Two-Speed Loader (Option):<br>Low Range<br>High Range | 0 - 7.35 mph (0 - 11,8 km/h)<br><br>0 - 7.35 mph (0 - 11,8 km/h)<br>0 - 11.02 mph (0 - 17,3 km/h) |

### Engine

|                                                                                         |                                                                                              |
|-----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| Make / Model                                                                            | Kubota / V2403-MDI-E3B Interim Tier 4                                                        |
| Fuel / Cooling                                                                          | Diesel / Liquid                                                                              |
| Horsepower:<br>- ISO 9249 EEC / SAE J1349 Net<br>- ISO 14396 Gross<br>- SAE J1995 Gross | 46.1 hp (34,4 kW) @ 2700 rpm<br>46.1 hp (34,4 kW) @ 2700 rpm<br>48.9 hp (36,5 kW) @ 2700 rpm |
| Torque:<br>- ISO 9249 EEC / SAE J1349 Net<br>- SAE J1995 Gross                          | 109.6 ft-lb (148,6 N•m) @ 1600 rpm<br>117.0 ft-lb (158,6 N•m) @ 1600 rpm                     |
| Low Idle rpm                                                                            | 1075 - 1225                                                                                  |
| High Idle rpm                                                                           | 2760 - 2900                                                                                  |
| Number of Cylinders                                                                     | 4                                                                                            |
| Displacement                                                                            | 148.5 in <sup>3</sup> (2433 cm <sup>3</sup> )                                                |
| Bore / Stroke                                                                           | 3.425 in / 4.03 in (87 mm / 102,4 mm)                                                        |
| Lubrication                                                                             | Gear Pump Pressure System with Filter                                                        |
| Crankcase Ventilation                                                                   | Closed Breathing                                                                             |
| Air Cleaner                                                                             | Dry replaceable paper cartridge with separate safety element                                 |
| Ignition                                                                                | Diesel - Compression                                                                         |
| Air Induction                                                                           | Naturally Aspirated                                                                          |
| Engine Coolant                                                                          | Propylene Glycol / Water Mixture                                                             |
| Starting Aid                                                                            | Glow Plugs - Automatically activated as needed in RUN position                               |

## Bobcat S510 Skid-Steer Loader Specifications

### Drive System

|              |                                                                                                                                                                                                              |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Main Drive   | Fully hydrostatic, 4-wheel drive                                                                                                                                                                             |
| Transmission | Infinitely variable tandem hydrostatic piston pumps, driving two fully reversing hydrostatic motors                                                                                                          |
| Final Drive  | Prestressed #80 HSOC endless roller chain (no master link) and sprockets in sealed chaincase with oil lubrication (Chains do not require periodic adjustments)<br>Two chains per side with no idler sprocket |
| Axle Size    | 1.98 in (50,29 mm), heat treated                                                                                                                                                                             |
| Wheel Bolts  | Eight - 9/16 in. wheel bolts fixed to axle hubs                                                                                                                                                              |

### Controls

|                                                                                             |                                                                                                                                                                                                                                                                                    |
|---------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Vehicle Steering                                                                            | Direction and speed controlled by two hand operated steering levers or optional joystick(s)                                                                                                                                                                                        |
| Loader Hydraulics:<br>- Lift and Tilt<br><br>- Front Auxiliary<br>- Rear Auxiliary (Option) | Controlled by separate foot pedals or optional Advanced Control System (ACS) or optional Selectable Joystick Controls (SJC)<br>Controlled by electrical switch on Right Hand steering lever or joystick<br>Controlled by electrical switch on Left Hand steering lever or joystick |
| Auxiliary Pressure Release                                                                  | Pressure relieved through quick couplers; Push couplers in, hold for 5 seconds                                                                                                                                                                                                     |
| Engine                                                                                      | Hand operated speed control, additional foot operated speed control pedal with SJC option; key-type start switch or optional Keyless Start Panel or optional Deluxe Instrumentation Panel and function error shutdown                                                              |
| Starting Aid                                                                                | Glow plugs automatically activated as needed in RUN position                                                                                                                                                                                                                       |
| Service Brake                                                                               | Two independent hydrostatic systems controlled by two hand operated steering levers or optional joystick(s)                                                                                                                                                                        |
| Secondary Brake                                                                             | One of the hydrostatic transmissions                                                                                                                                                                                                                                               |
| Parking Brake                                                                               | Mechanical disc, manually operated switch on left instrument panel                                                                                                                                                                                                                 |

## Bobcat S510 Skid-Steer Loader Specifications

## Hydraulic System

|                                                                                                                                                                                         |                                                                                                                                                                                                              |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pump Type                                                                                                                                                                               | Engine driven, gear type                                                                                                                                                                                     |
| Pump Capacity                                                                                                                                                                           | 17.1 U.S. gpm (64,7 L/min)                                                                                                                                                                                   |
| System Relief at Quick Couplers                                                                                                                                                         | 3450 - 3550 psi (23,8 - 24,5 MPa) (238 - 245 bar)                                                                                                                                                            |
| Filter (Hydraulic / Hydrostatic)                                                                                                                                                        | Replaceable beta 10 micron = 200, drop in element                                                                                                                                                            |
| Filter (Charge)                                                                                                                                                                         | Replaceable beta 10 micron = 200, drop in element                                                                                                                                                            |
| Hydraulic Cylinders:<br>Bore Diameter: Lift Cylinder (2)<br>Tilt Cylinder (2)<br>Rod Diameter: Lift Cylinder (2)<br>Tilt Cylinder (2)<br>Stroke: Lift Cylinder (2)<br>Tilt Cylinder (2) | Double-acting; tilt cylinders have cushioning feature on dump and rollback<br>2.25 in (57,2 mm)<br>2.75 in (69,9 mm)<br>1.50 in (38,1 mm)<br>1.50 in (38,1 mm)<br>27.50 in (698,5 mm)<br>13.02 in (330,7 mm) |
| Control Valve - Standard                                                                                                                                                                | 3-Spool, open center, manually operated with spring detent for lift float;<br>Electrically controlled auxiliary spool                                                                                        |
| Control Valve - ACS and SJC                                                                                                                                                             | 3-Spool, open center with electric actuator controlled lift with float and tilt;<br>Electrically controlled auxiliary spool                                                                                  |
| Fluid Lines                                                                                                                                                                             | SAE Standard tubelines, hoses, and fittings                                                                                                                                                                  |
| Fluid Type                                                                                                                                                                              | BOBCAT FLUID, Hydraulic / Hydrostatic<br>6903117 - (Two - 2.5 U.S. gal)<br>6903118 - (5 U.S. gal)<br>6903119 - (55 U.S. gal)                                                                                 |
| Hydraulic Function Time:<br>- Raise Lift Arms<br>- Lower Lift Arms<br>- Bucket Dump<br>- Bucket Rollback                                                                                | 3.3 seconds<br>2.8 seconds<br>2.3 seconds<br>1.7 seconds                                                                                                                                                     |

## Bobcat S510 Skid-Steer Loader Specifications

### Electrical System

|                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Alternator      | Belt driven, 90 amperes, open frame                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Battery         | 12 volts, 600 cold cranking amperes @ 00F (-180C),<br>115 minute reserve capacity @ 25 amperes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Starter         | 12 volts, gear type, 3.62 hp (2,7 kW)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Instrumentation | <p><b>Gauges:</b><br/>Engine Coolant Temperature and Fuel Level</p> <p><b>Warning lights:</b><br/>Fuel Level, Seat Belt, Engine Coolant Temperature, Engine Malfunction, Hydraulic System Malfunction, and General Warning</p> <p><b>Indicators:</b><br/>BICS™ Functions, Two-Speed, 3-Point Restraint, and Turn Signals</p> <p><b>Data Display:</b><br/>Operating Hours, Engine rpm, **Speed Management Setting, Maintenance Clock Countdown, Battery Voltage, Service Codes, Engine Preheat Countdown, Lift and Tilt Compensation Setting, **Steering Drift Compensation Setting, and<br/>**Drive Response Setting</p> <p style="text-align: right;">**SJC Option Only</p> <p><b>Other:</b><br/>Audible Alarm, Lights, and Option / Accessory Switches</p> <p><b>Optional Deluxe Instrumentation Panel:</b><br/>*Additional displays for: Engine rpm, Engine Coolant Temperature, Engine Oil Pressure, System Voltage, Hydraulic Fluid Temperature, and Hydrostatic Charge Pressure</p> <p>*Additional Features Included: Keyless Start, Digital Clock, Job Clock, Password Lockout, Multiple-Language Display, Help Screens, Diagnostic Capability, and Engine / Hydraulic Systems Shutdown Function</p> |

### Capacities

|                                                             |                                                |
|-------------------------------------------------------------|------------------------------------------------|
| Fuel                                                        | 24.75 U.S. gal (93,7 L)                        |
| Engine Oil with Filter Change                               | 9.2 qt (8,7 L)                                 |
| Engine Cooling System:<br>- with Heater<br>- without Heater | 3.1 U.S. gal (11,7 L)<br>3.0 U.S. gal (11,4 L) |
| Hydraulic / Hydrostatic Reservoir                           | 2.0 U.S. gal (7,57 L)                          |
| Hydraulic / Hydrostatic System                              | 8.4 U.S. gal (31,8 L)                          |
| Chaincase Reservoir                                         | 8.5 U.S. gal (32,2 L)                          |

## Bobcat S510 Skid-Steer Loader Specifications

### Tires

|                                |                                                                                                                         |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| Standard Duty (Standard)       | 10.00 - 16.5, 8 Ply Rating                                                                                              |
| Heavy Duty (Option)            | 10.00 - 16.5, 10 Ply Rating                                                                                             |
| Heavy Duty Offset (Option)     | 10.00 - 16.5, 10 Ply Rating                                                                                             |
| Heavy Duty Poly Fill (Option)  | 10.00 - 16.5, 10 Ply Rating                                                                                             |
| Severe Duty (Option)           | 10.00 - 16.5, 10 Ply Rating                                                                                             |
| Severe Duty Poly Fill (Option) | 10.00 - 16.5, 10 Ply Rating                                                                                             |
| Solidflex (Option)             | 31 x 6 x 10                                                                                                             |
| Super Float (Option)           | 31 x 12 - 16.5, 10 Ply Rating                                                                                           |
| Recommended Pressure           | Inflate tires to MAXIMUM pressure shown on the sidewall of the tire; DO NOT mix brands of tires used on the same loader |