

# SKID STEER LOADER

# CASE

CONSTRUCTION

SINCE 1842.

## SV185B

### ENGINE

Brand	Perkins
Model	404D-22T
Type	4-stroke, turbocharged, Tier 3 certified
Cylinders	4
Bore x Stroke	84 x 100 mm (3.31 x 3.94")
Displacement	2,212 cm <sup>3</sup> (135 in <sup>3</sup> )
Fuel injection	Indirect
Fuel	Diesel
Fuel filter	In-line filter
Air inlet	Turbocharged with internal EGR
Cooling system	Liquid
Motor speed (rpm)	
High - no load	3,140 ± 40
Rated - full load	2,900
Low - no load	1,200 ± 30
Power at 2,900 rpm	
Gross SAE J1349	60 hp (44.7 kW)
Net SAE J1349	57 hp (42.4 kW)
Maximum torque at 1,800 rpm	171 N.m (126 lbf.ft)

### ENGINE COOLING SYSTEM

Radiator	
Core type	Fully aluminum
Core area	0.257 m <sup>2</sup>
Row of tubes	43
Pressure on the lid	1.1 ± 0.1 bar (16 ± 2 psi)
Fan	
Diameter	440 mm (17.7")
Ratio	1.1:1
Water pump	
Type	Centrifuge
Flow	71.2 l/min (18.8 gpm)
Engine lubrication	
Pump Operational Angles	
Side by side	35°
Raised bucket	35°
Lowered bucket	35°
Oil filter	Full flow cartridge, disposable

### POWERTRAIN

Drive Pump - Mechanical	
Pump / motor ratio	1:1
Displacement	35 cm <sup>3</sup> (2.14 in <sup>3</sup> )
Pump flow rate with motor at rated rotation of	98 l/min (25.9 gpm)
Charging pressure	25 bar (363 psi)
System relief pressure	345 bar (5,000 psi)
Control	Mechanical
Drive pump - Electrohydraulic (EH)	
Pump / motor ratio	1:1
Displacement	35 cm <sup>3</sup> (2.14 in <sup>3</sup> )
Pump flow rate with motor at rated rotation of	95 l/min (25.1 gpm)
Charging pressure	25 bar (363 psi)
System relief pressure	360 bar (5,220 psi)
Control	Electrohydraulic
Traction engines	
Maximum displacement	325 cm <sup>3</sup> (19.83 in <sup>3</sup> )
Speed at rated motor rotation	313 rpm
High speed - optional	443 rpm
Torque at full flow and relief pressure	1,783 N.m (1,315 lbf.ft)
Displacement speed (tire 10 x 16.5)	
Low	12.7 km/h (7.9 mph)
High (optional)	18.0 km/h (11.2 mph)
Final reduction	Chain drive with single reduction
Drive chain	
Size	ASA #80
Tensile strength	93.4 kN (21,000 lbf)
Axles	
Maximum torque at full flow and relief pressure	5,940 N.m (4,381 lbf.ft)
Diameter	50.8 mm (2")
Length	384 mm (13.62")

### Parking break

Type	Spring applied, hydraulic disc release
Actuation	Application of the parking brakes by actuating the brake knob on the hand control or on the instrument panel, by raising the safety bar of the operator's seat, when the operator rises from the seat or by switching off the engine

### HYDRAULIC SYSTEM

Standard pump	
Type	Gear pump
Displacement	
Standard	24.9 cm <sup>3</sup> (1.52 in <sup>3</sup> )
Optional High Flow	12.5 cm <sup>3</sup> (0.76 in <sup>3</sup> )
Pump flow at rated motor rotation	72 l/min (19 gpm)
Flow rate with optional High flow at rated motor rotation	109 l/min (28.7 gpm)
Skid Steer control valve	
3 spools / Open Center / In-line	
Relief pressure	210 bar (3,046 psi)
Relief pressures	
Arm lift	225 bar (3,263 psi)
Bucket discharge	260 bar (3,770 psi)
Bucket retraction	80 bar (1,160 psi)
Hydraulic oil cooler	
Flaps numbers	3.94 per centimeter
Number of tubes	9
Area	887 cm <sup>2</sup> (137.5 in <sup>2</sup> )

## INSTRUMENT PANEL

### Indicators

Text indicators Hour meter, engine rotation, engine cooling fluid temperature, or hydraulic oil temperature  
 LCD bar chart for hydraulic oil temperature, engine cooler temperature, and fuel level in fuel tank

### Warning lights with alarms

Immediate stop  
 Motor malfunction  
 Hydraulic system malfunction  
 Malfunction of the electronic system

### Indicator lights

Warning to lower the security bar  
 Parking brake indicator activated  
 Engine preheating light

## ELECTRIC SYSTEM

Alternator	120 A
Starting motor	2.0 kW
Battery	12 V 950 CCA for cold cranking at -18 °C (0 °F)

## OPERATOR ENVIRONMENT

ROPS / FOPS cab with side screens
Tilting ROPS / FOPS frame
Rear window with emergency exit
Instrument panel
Retractable seat belt
Manual and foot throttle
Alarm package
Cabin roof lining
Solar roof
Cup holder
Power outlet
Foot rest
Storage tray
Ergonomic low effort manual controls
Padded safety bar with integrated armrest
Loader controls locking system
Electric parking brake control
Rubber mat for floor protection / cleaning
Suspension vinyl seat

## CYLINDERS

Lift cylinder	
Cylinder diameter	63.5 mm (2.5")
Stem diameter	44.5 mm (1.75")
Stroke	681 mm (26.8' ")
Closed length	982 mm (38.7")
Bucket cylinders	
Cylinder diameter	63.5 mm (2.5")
Stem diameter	34.9 mm (1.375")
Stroke	410 mm (16.14' ")
Closed length	610 mm (24")

## OPERATIONAL WEIGHTS

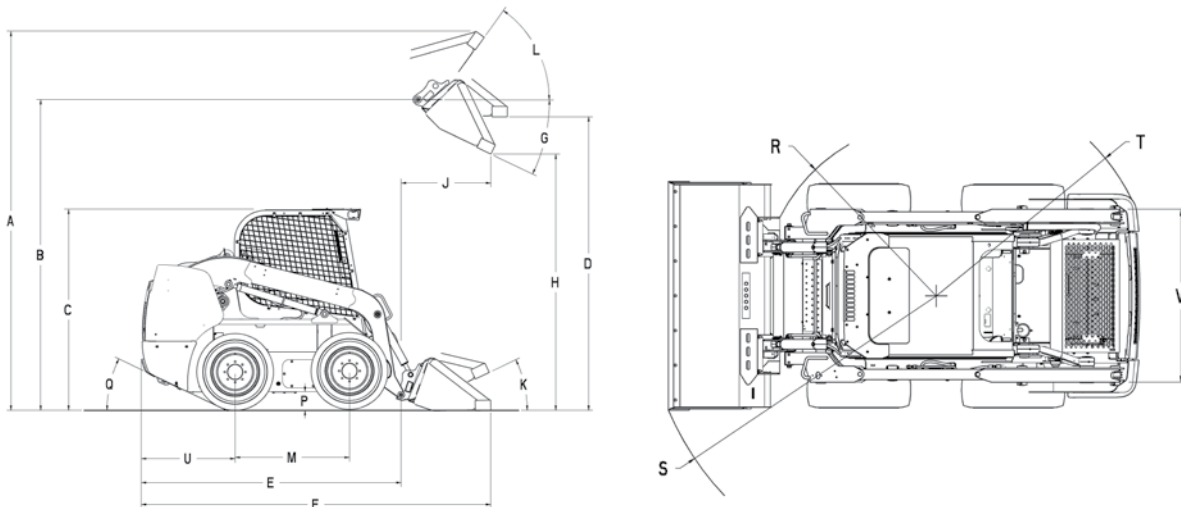
Operational weight	2,980 kg (6,570 lb)
Transport weight	2,840 kg (6,261 lb)
Cab side windows	21.3 kg (46.9 lb)
Lexan®Door	34.0 kg (75 lb)
Glass door withwindshield wiper	34.0 kg (75 lb)
Suspension seat	10 kg (22 lb)

## SERVICE CAPACITIES

Fuel tank	75.7 l (20 gal)
Engine oil (with filter)	7.1 l (7.5 gal ct)
Hydraulic system	
Storage	16.3 l (4.3 gal)
Storage for chains (on each side)	7.4 l (7.8 qt)

## TIRE SELECTION

	Size	Overall width
Galaxy XD 2002 (10x16.5 Heavy Duty (64 OTW))	10x16.5	1.625 (5' 4")
TWEEL All Terrain (10X16.5 TWEEL 64 OTW )	10x16.5	1.625 (5' 4")
Galaxy XD 2002 (12x16.5 Heavy Duty (70 OTW))	12x16.5	1,785 mm (5' 10.3")



## DIMENSIONS

<b>A. Total operational height:</b>		
With foundry / excavation bucket		3.82 m (150,4' ")
With low profile extended bucket		4.06 m (159,8' ")
Height up to:		
<b>B. Bucket hinge pin</b>		3.05 m (120")
<b>C. Cabin top</b>		1.97 m (77,6")
<b>D. Leveled bucket bottom with fully raised loader arm</b>		2.88 m (113,4")
Total length:		
<b>E. Without accessories, with coupling device</b>		2.69 m (105,9")
<b>F. With foundry / excavation bucket at ground level</b>		3.45 m (135,8")
With low-profile extended bucket at ground level		3.58 m (140,9")
<b>G. Dump angle at maximum height</b>		51,9°
<b>H. Dump height - fully raised loader arm</b>		
With foundry / excavation bucket		2.38 m (93,7' ")
With low profile extended bucket		2.21 m (87,0' ")
<b>J. Reach - fully elevated loader arm with low profile extended bucket</b>		0.95 m (37,4")
Attachment maximum retraction angle:		
<b>K. Bucket at ground level</b>		35°
<b>L. Bucket at maximum height</b>		87,6°
<b>M. Wheelbase</b>		1.13 m (44,5")
<b>P. Ground clearance (bottom of protection plate)</b>		0.18 m (7")
<b>Q. Output angle</b>		23°
Front turning radius:		
<b>R. Without the bucket</b>		1.35 m (53,1")
<b>S. With foundry / excavation bucket at ground level</b>		2.04 m (80,3")
With low-profile extended bucket at ground level		2.25 m (88,6")
<b>T. Rear turning radius</b>		1.60 m (63,0")
<b>U. Rear axle to bumper</b>		0.92 m (36,2")
<b>V. Machine gauge, measure between the wheel centers</b>		1.37 m (53,9")

## SPECIFICATIONS

Operational load	840 kg (1,850 lb)
Dump load	1,678 kg (3,700 lb)
Tear force	
Lifting arm	15.3 kN (3,440 lbf)
Bucket	24.7 kN (5,553 lbf)
Cycle times (in seconds)	
To raise arms	3.5
To lower arms	2.3
To unload attachment	2.1
To retract attachment	1.5

## OPTIONAL BUCKETS

Type	Width m (in)	Weight kg (lb)	Heaped capacity m <sup>3</sup> (yd <sup>3</sup> )
Foundry / excavation	1,83 (72)	190 (419)	0,46 (0,60)
Extended low profile	1,68 (66)	214 (472)	0,45 (0,59)
	1,83 (72)	232 (511)	0,50 (0,65)
Heavy Duty	1,83 (72)	230 (507)	0,40 (0,52)

## STANDARD EQUIPMENT

### Operator Environment

ROPS / FOPS cabin with side screens  
Tilting ROPS / FOPS frame  
Rear window with emergency exit  
Instrument panel  
Suspension vinyl seat  
Retractable seat belt  
Manual throttle  
Alarm package  
Cabin roof lining  
Solar roof  
Cup holder  
Power outlet  
Foot rest  
Storage tray  
Ergonomic low effort manual controls  
Padded safety bar with integrated armrest  
Loader controls locking system  
Electric parking brake control  
Rubber mat for protection / cleaning of the floor

### Loader

Loader arm vertical design  
Mechanical device of attachment coupling  
Lift arm support beam of the loader

### Engine

Perkins / 404D-22T  
Integrated oil cooling system of the engine  
Fuel filter with water separator  
Dual element air filter.  
120 A alternator  
12V 950 CCA battery  
Glow plug  
Overlapped oil heat exchanger and radiator  
Spark-arresting silencers

### Power train

Hydrostatic four-wheel drive  
Servo controls  
ASA #80HS Drive chain  
SAHR parking disc brakes

### Hydraulic system

210 bar hydraulic system (3,046 psi)  
72 l/min (19 gpm)  
Hydraulic circuit pedal lock  
ISO flat face couplers mounted on loader arm  
Cancellation of auxiliary functions  
Operational blocking system of the loader  
Loader lift neutralizer  
Loader 3-spool control valve  
Oil exchanger for severe applications  
Loader arm fluctuation position

### Others

Lockable maintenance access hood  
Single point daily maintenance  
Halogen lights, 2 frontal, 2 lateral, 2 rear  
Rear lights  
Remote oil drain

## OPTIONAL EQUIPMENT

### Operator environment

Suspension seat *Deluxe* coated with special fabric, with lumbar support and heating system  
76mm retractable seat belt (3")  
Internal mirror  
Radio  
Air conditioning and heating  
Door for demolition purposes  
Front auxiliary electric control  
Front glass door with windshield wiper and washer  
Sliding side windows

### Loader

*Ride Control*  
Attachment coupling hydraulic device  
One-way hydraulic self-leveling (climb)  
Electrohydraulic controls (EH)

### Hydraulic system

High flow hydraulic system (*High Flow*) of 210 bar (3,046 psi) 109 l/min (28.7 gal)  
Crankcase drain pipe fittings

### Engine

Engine block heater  
Battery disconnect key

### Others

2 speed drive  
*Deluxe* Dashboard  
Headlights for highway traffic  
Giroflex  
Lifting hooks  
Special paint  
Stickers  
Factory installed tires – refer to page 2  
Buckets – refer to page 3  
Bolt-on bucket cutting blades  
Forks to 1.22 m (48") *pallets*



Fleet management and monitoring system by satellite or cell phone tracking.

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**CaseCE.com**



### Manufacturing plants

Contagem – Minas Gerais – Brazil  
Av. General David Sarnoff, 2237  
Inconfidentes – C. P. 32210-900  
Phone.: +55 31 2104-3392

Sorocaba – São Paulo – Brasil  
Av. Jerome Case, 1801  
Éden – C. P. 18087-220  
Phone: +55 15 3334-1700