CASE CONSTRUCTION

SR270B

SKID STEER LOADER

TIER 4 FINAL CERTIFIED



ENGINE

Model	FPT F5B FL413 D*C001
Emissions Certification	Tier 4 Final
Type	Diesel, Turbo – Direct Injection
Cylinders	4
Bore/Stroke	3.9 x 4.3 in (99 x 110 mm)
Displacement	207 in³ (3.4 L)
Fuel injection	Direct
Fuel	#2 Diesel
Fuel filter:	
Pre-filter	Beta (30) = 200/spin-on
Main filter	Beta (4) = 20/spin-on
Air intake	Turbocharged w/ waste gate and external cooled EGR
Exhaust aftertreatment	Selective Catalytic Reduction – SCR
Cooling	Liquid
Engine speeds	RPM
High idle – no load	2500 +/- 25
Rated – full load	2500
Low idle	1150 +/- 25
Horsepower @ 2500 RPM – SAE J1349:	
Gross	90 hp (67 kW)
Net	84 hp (63 kW)
Peak torque @ 1400 RPM	282 lb·ft (383 N·m)
Radiator:	
Core type	Aluminum bar and plate
Core size area	2.21 ft² (0.206 m²)
Rows of tubes	21
Cap pressure	16 +/- 2 psi (1.10 +/- 0.14 bar)
Fan:	
Diameter	22 in (560 mm)
Ratio	0.96:1 standard, 1.1:1 high flow
Water pump:	
Style	Centrifugal
Flow	47.8 gpm (181 L/min)
Engine lubrication pump	Rotor pump w/ deep sump pan, plate cooler and pressurized under-piston nozzles
Pump operating angle ratings:	
Side to side	45°
Bucket up	35°
Bucket Down	45°

LIFT GEOMETRY

Radial Lift

DRIVETRAIN

Drive pump controls	Servo-assist mechanical
Pump to engine ratio	1:1
Displacement	2.81 in³ (46 cm³)
Flow @ rated engine RPM:	
@ 97% efficiency	29.4 gpm (111 L/min)
Charge pressure	360 psi (24.5 bar)
System relief pressure	5,220 psi (360 bar)
Drive pump controls	Electro-hydraulic
Pump to engine ratio	1:1
Displacement	2.75 in³ (45 cm³)
Flow @ rated engine RPM:	
@ 97% efficiency	28.8 gpm (109 L/min)
Charge pressure	362 psi (25 bar)
System relief pressure	5,220 psi (360 bar)
Drive motors:	
Max. displacement	28.7 in³ (470 cm³)
Displacement:	
High speed	17.2 in³ (282 cm³)
Motor RPM @ high idle and 97% efficiency:	
2-speed	355
Motor torque @ max. displacement and relief pressure, calculated @ 5,220 psi (360 bar):	1,987 lb·ft (2 694 N·m)
Travel speed:	
Low range	7.0 mph (11.3 kph)
High range	10.5 mph (16.9 kph)
Final drive	Single-reduction chain drive
Drive chain:	
Size	ASA #100
Tensile strength	30,000 lb (133.4 kN)
Axles:	
Torque @ max. displacement and relief pressure	5,957 lb·ft (8 077 N·m)
Diameter	2.44 in (62 mm)
Length	15.6 in (396 mm)
Parking brake:	
Type	Spring-applied, hydraulic release multiple disc.
Engagement	Depress on/off brake button on handle or instrument panel, raise seat bar, get off seat or stop engine.

ELECTRICAL

Alternator	160 amp
Starter	4.29 hp (3.2 kW)
Battery	12-volt low-maintenance 1,000 cold-cranking amps @ 0° F (-18° C°)

OPERATOR ENVIRONMENT

ROPS/FOPS Level 1 canopy w/ side screens; Keyed start ignition; Tilt ROPS/FOPS; Rear window w/ emergency escape; Deluxe cloth, air suspension seat, w/ 2 in (51 mm) retractable 3 point lap seat belt, w/ heater and lumbar support; Hand and foot throttle; Alarm package – back-up and horn; Rearview mirror; Headliner; Dome Light; Top window; Cup holder; 12V Power plug socket; Foot rest; Seat Pocket; Padded seat bar w/ integral armrests; Loader control lockout system; Electric parking brake control; Operator's compartment floor cleanout; Proportional auxiliary hydraulic control – on joystick; Advanced Instrument Cluster w/ digital hour meter, tachometer, fuel level LCD bar graph w/ alarm, DEF Level, diagnostic features and security lockout.

Warning lights with alarms:
Engine coolant temperature; Engine oil pressure; Engine malfunction; Hydraulic charge pressure; Hydraulic filter restriction; Hydraulic oil temperature: Critical system stop, Engine system, Hydraulic system, Electrical and diagnostic system.

Warning alarms:
Battery voltage – plus display; Diesel Exhaust Fluid – DEF; Oil service.

Indicator light:
Engine preheat; Parking brake; Seat bar reminder.

OPERATING WEIGHT

Unit equipped w/ open cab; 165 lb operator; 72 in Low Profile bucket; full of fuel; 12 x 16.5 tires:	8,117 lb (3 681 kg)
Shipping weight	7,773 lb (3 526 kg)
Add-on weights:	
Side cab glass	47 lb (21.3 kg)
Polycarbonate cab door	75 lb (34.0 kg)
Glass cab door w/ wiper	75 lb (34.0 kg)
Suspension seat	22 lb (10.0 kg)
Additional counterweight	300 lb (136.0 kg)

HYDRAULICS

Implement pump type	Gear
Displacement:	
Standard aux.	2.23 in³ (36.6 cm³)
High-flow aux.	1.24 in³ (20.4 cm³)
Standard flow @ rated engine RPM:	
@ 100% efficiency	24.2 gpm (91.5 L/min)
Optional high-flow @ rated engine RPM:	
@ 100% efficiency	37.6 gpm (142.5 L/min)
Enhanced high-flow @ rated engine RPM:	
@ 100% efficiency	35.0 gpm (132.5 L/min)
Loader control valve:	
Type	3 spool/open center/series - series
Relief pressure	3,046 psi (210 bar)
Port relief pressures:	
Loader raise	3,263 psi (225 bar)
Bucket curl	3,770 psi (260 bar)
Bucket dump	1,160 psi (80 bar)
Hydraulic lines:	
Tubing	37° JIC Flare
Loop hoses	SAE 100 R19

HYDRAULICS CONT.

Hydraulic oil cooler:	
Number of fins	10 per inch (3.94 per cm)
Number of tube rows x columns	9 bar/plate
Area	138.7 in^2 (890.0 cm^2)
Hydraulic filter	Beta (4) = 75/spin-on
Lift cylinders:	
Bore diameter	2.75 in (69.85 mm)
Rod diameter	2.0 in (50.8 mm)
Stroke	33.4 in (847.9 mm)
Closed length	47.1 in (1 196 mm)
Bucket cylinders:	
Bore diameter	3.0 in (76.2 mm)
Rod diameter	1.5 in (38.1 mm)
Stroke	16.4 in (410 mm)
Closed length	24.0 in (610 mm)

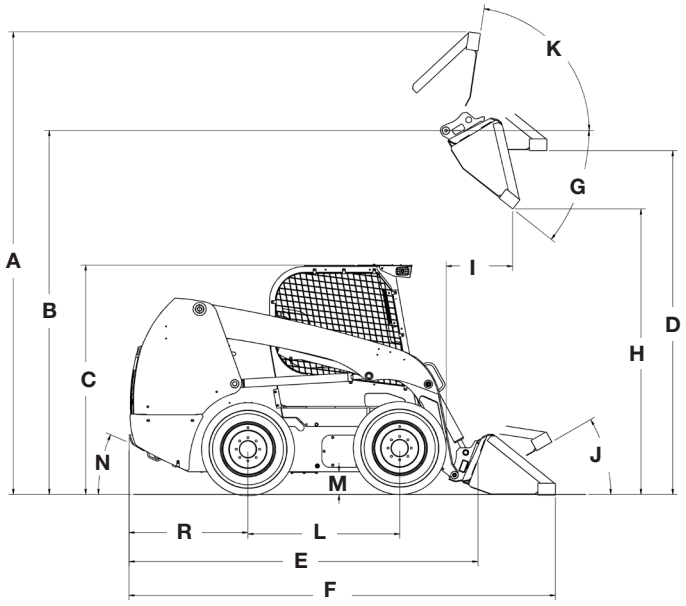
SERVICE CAPACITIES

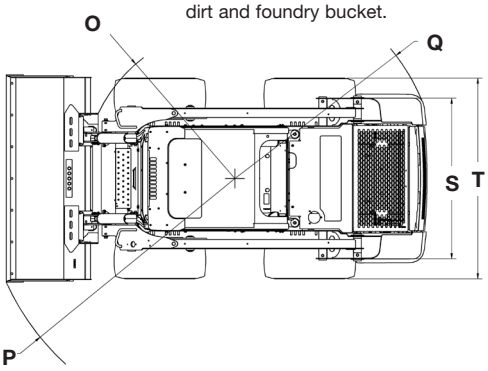
Fuel tank	25.5 gal (96.5 L)
Engine oil w/ filter	8.9 qt (8.5 L)
Hydraulic system:	
Reservoir	6.0 gal (22.7 L)
Total	11.9 gal (45.4 L)
Chain tanks – per side	5.9 gal (22.2 L)
Diesel Exhaust Fluid (DEF) Tank	2.8 gal (10.7 L)

PERFORMANCE SPECS

Rated operating capacity – ROC*:	
50% of tipping load	2,700 lb (1 225 kg)
w/ additional counterweight	2,800 lb (1 270 kg)
Tipping load*	5,400 lb (2 450 kg)
Breakout forces @ 3,150 psi (217 bar)*:	
Bucket cylinders	8,677 lb (38.6 kN)
Lift cylinders – tip limit	6,096 lb (27.1 kN)
Cycle times:	
Raise	3.6 sec
Lower	2.0 sec
Dump	2.6 sec
Roll back	2.0 sec

NOTE: *Measured using 72 in (1.83 m) dirt and foundry bucket.





Line drawings are for illustrative purpose only and may not be exact representation of unit.

DIMENSIONS

A. Overall operating height:	
with foundry/excavating bucket	156.3 in (3.97 m)
with low profile bucket	160.3 in (4.07 m)
with low profile extended bucket	165.3 in (4.20 m)
Height to:	
B. Bucket hinge pin	125.1 in (3.18 m)
C. Top of ROPS	78.8 in (2.00 m)
D. Bottom of level bucket, fully raised	118.2 in (3.00 m)
Overall length:	
E. without attachment with coupler	118.7 in (3.01 m)
F. with foundry/excavating bucket on ground	143.9 in (3.66 m)
with low profile bucket	148.0 in (3.76 m)
with low profile extended bucket	153.0 in (3.89 m)
G. Maximum dump angle	38.1°
H. Dump height:	
with foundry/excavating bucket	100.9 in (2.56 m) @ 38.1°
with low profile bucket	98.3 in (2.50 m) @ 38.1°
I. Dump reach at maximum height with low profile bucket	22.2 in (0.56 m) @ 38.1°
Maximum attachment rollback:	
J. Bucket on ground	30.8°
K. Bucket at full height	99.8°
L. Wheelbase	52.0 in (1.32 m)
M. Ground clearance – bottom of belly pan	8.0 in (0.20 m)
N. Angle of departure	23.5°
Clearance circle:	
O. without bucket	53.7 in (1.37 m)
P. with 72 in (1.83 m) foundry/excavating bucket in carry position	83.5 in (2.12 m)
with 72 in (1.83 m) low profile bucket on ground	87.2 in (2.22 m)
with 72 in (1.83 m) extended low profile on ground	91.9 in (2.33 m)
Q. Clearance circle rear	71.2 in (1.81 m)
R. Rear axle to bumper	42.4 in (1.08 m)
S. Tread over gauge with spec tires	56.9 in (1.45 m)
T. Over the tire width spec tires	69.8 in (1.77 m)

OPTIONAL BUCKETS

Type	Width	Weight	Heaped Capacity
Dirt & Foundry	72 in (1.83 m)	420 lb (190 kg)	16.2 ft^3 (0.46 m^3)
	78 in (1.98 m)	440 lb (200 kg)	17.7 ft^3 (0.50 m^3)
Low Profile	72 in (1.83 m)	480 lb (218 kg)	14.8 ft^3 (0.42 m^3)
Low Profile Extended	72 in (1.83 m)	510 lb (232 kg)	17.7 ft^3 (0.50 m^3)
	78 in (1.98 m)	540 lb (245 kg)	19.1 ft^3 (0.54 m^3)
	84 in (2.13 m)	575 lb (262 kg)	20.5 ft^3 (0.58 m^3)
Light Material	72 in (1.83 m)	475 lb (216 kg)	23.3 ft^3 (0.66 m^3)
	84 in (2.13 m)	540 lb (245 kg)	27.5 ft^3 (0.78 m^3)
Manure & Slurry	72 in (1.83 m)	480 lb (218 kg)	19.1 ft^3 (0.54 m^3)
Heavy-Duty	72 in (1.83 m)	510 lb (230 kg)	14.1 ft^3 (0.40 m^3)
	78 in (1.98 m)	530 lb (240 kg)	15.5 ft^3 (0.44 m^3)
	84 in (2.13 m)	550 lb (250 kg)	17.0 ft^3 (0.48 m^3)
Heavy-Duty Extended with SmartFit Teeth	72 in (1.83 m)	667 lb (303 kg)	17.4 ft^3 (0.49 m^3)
	78 in (1.98 m)	697 lb (316 kg)	18.9 ft^3 (0.54 m^3)
	84 in (2.13 m)	728 lb (330 kg)	20.5 ft^3 (0.58 m^3)

STANDARD EQUIPMENT

OPERATOR ENVIRONMENT

See page 1

ENGINE

FPT F5B FL413 D*C001
207 CID (3.4 L) Turbo
Tier 4 Final Certified
Diesel Oxidation Catalyst (DOC) with Selective Catalytic Reduction (SCR) muffler
Charged Air Cooler (CAC)
High Pressure Common Rail (HPCR) fuel injection
Horsepower:
- Gross: 90 hp (67 kW)
- Net: 84 hp (63 kW)
- Peak torque: 282 lb·ft (383 N·m)

160 amp alternator
Dual element air cooler
Organic Acid Technology (OAT)
Anti-freeze solution to -34° F
Fuel tank – 25.5 gal (U.S.)
Over and under radiator and oil cooler
3-stack after cooler/radiator/oil cooler configuration
Glow plugs
Integral engine oil cooler
Fuel filter with water trap
1,000 CCA 12V battery
Master electrical disconnect
Jump start terminal

DRIVETRAIN

2-speed hydrostatic four wheel drive
ASA #100HS drive chain
SAHR disc parking brake

HYDRAULICS

Auxiliary hydraulics:
- @ 3,050 psi (210 bar) – 24.2 gpm (91.5 L/min)

6 micron oil filtration system
3-spool loader control valve
Auxiliary hydraulic disconnects, ISO flat-face – connect-under-pressure with case drain
Hydraulic circuit pedal lock
Auxiliary function lockout override
Loader lift lockout override
Heavy-duty hydraulic oil cooler
Loader arm float position
Loader function lockout system

LOADER

Auxiliary front electric control
Heavy duty hydraulic attachment coupler
Radial lift geometry
Loader lift arm support strut

TIRES

12 X 16.5 Heavy duty

OTHER STANDARD FEATURES

LED lights – 2 front, 2 side, 2 rear flood
Pre-wired for rotating beacon
Lockable service access hood
Single-point daily service
Rear tail lights
Remote oil and fuel filters
Block heater
Debris ingression sealing
Mounting points for add-on counterweights

TELEMATICS

CASE SiteWatch™ Telematics – includes hardware and a 5-yr data subscription
SiteConnect Module providing remote diagnostics capability

OPTIONAL EQUIPMENT

OPERATOR ENVIRONMENT

Enclosed cab:
- Fully sealed and pressurized – FSP
- Glass door with wiper and washer
- Sliding side windows – removable
- Heater and air conditioner
- AM/FM Bluetooth radio with 2 speakers
- Keyless start ignition

8 in Color LCD Display
Economy Mode (auto idle shutdown)
Auto Engine Protection Shutdown
3-point seat belt
Electro-hydraulic controls:
- For drive/steering, loader functions
- Switchable between H and ISO patterns
- Adjustable sensitivity of controls

Mechanical hand controls
Hand and foot controls:
- Hand controls the loader drive function and foot controls the bucket and boom

Suspension seat, vinyl
Demolition cab door with polycarbonate
Ignition Timeout
Machine Settings User Access Levels
Operator Security Codes
Auto Idle setting

HYDRAULICS

High-flow auxiliary hydraulics – combined:
- @ 3,050 psi (210 bar) – 37.6 gpm (142.5 L/min)

Enhanced high-flow auxiliary hydraulics:
- @ 4,000 psi (276 bar) – 35.0 gpm (132.5 L/min)

Second auxiliary hydraulics
Hydraulic one-way self-leveling
Ride control

LOADER

Hydraulic attachment coupler

DRIVETRAIN

Creep Speed Mode (for EH machines only)

OTHER

Language decals
Buckets – see page 3
Bolt-on bucket cutting edges
Special paint
Offsite service arrangement

FACTORY SUPPLIED ATTACHMENTS

Add-on counterweights
Road lights
Rotating beacon
Four-corner LED strobe

SERVICE PARTS

3 inch (76.2 mm) retractable seat belt
Bolt-on heavy-duty bucket teeth

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Biodiesel Ready

CASE Construction Equipment is biodiesel-friendly. NOTE: All engines meet current EPA emissions regulations. All specifications are stated in accordance with SAE Standards or Recommended Practices, where applicable.

SAFETY™ NEVER HURTS

Always read the Operator's Manual before operating any equipment. Inspect equipment before using it, and be sure it is operating properly. Follow the product safety signs and use any safety features provided.

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